Vol.5 No. 8
October, 1985

$2.25

CURRENT NOTES

The Newsletter For ATARI Owners

Published By

ACE

The Washington Area
Atari
Computer
Enthusiasts

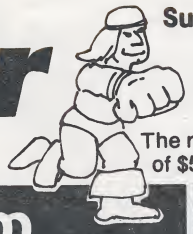
Special Features

REF-BASE: Minature
Database Manager
Built with BASIC XL
How to Get the Most
Out of CompuServe
ST Rules Brittania
HEX: An ST Graphic
Strategy Game
Six-Gun Shootout
How I Made an IBM-ST
One Meg ST Upgrade

Regular Features

Action! Action
Atari Scuttlebits
Battle Bytes
The CD Report
Game Views
Going Online
Learning through LOGO
ST World
Tips 'N' Traps

Atari Power



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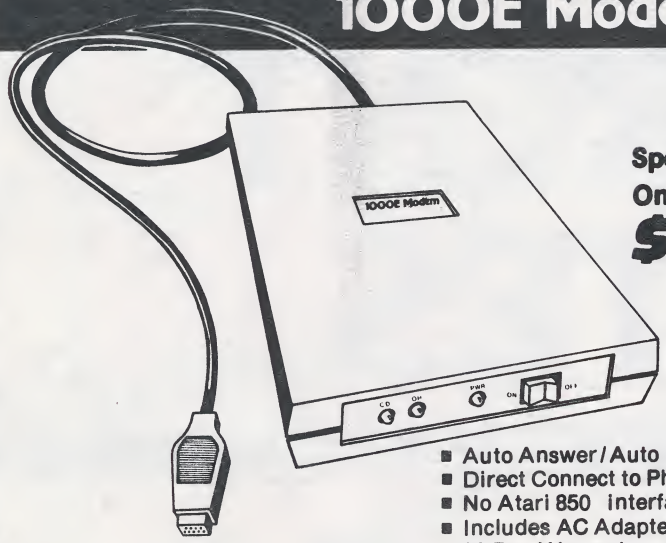

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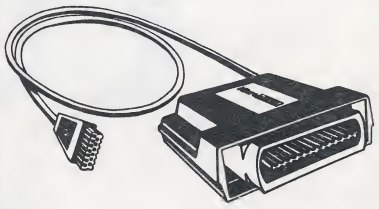

- Parallel interface for Atari computers
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MicroStuffer 64K Printer Buffer works with any computer and printer using the Centronics 36-pin standard. Allows multiple printing of buffered data.

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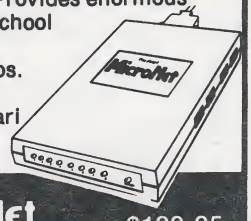
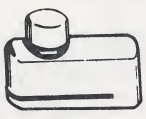


MicroNet $199.95



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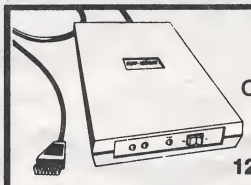

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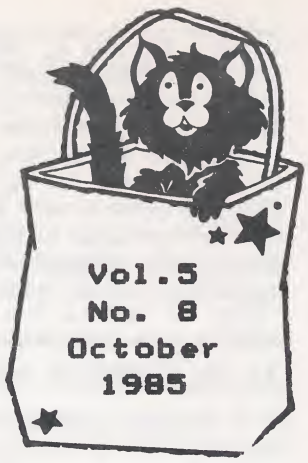

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The Editor of CURRENT NOTES is Joe Waters, 122 N. Johnson Road, Sterling, Virginia 22170. (703) 430-1215. Submissions of articles or advertising copy, subscription requests or back-issue orders should be sent to the editor. **Deadline date for articles and advertisements is the 12th day of the preceeding month.**

Editorial

I sure didn't expect to do it again, but once more we have 48 pages chock full of Atari information. Indeed, I have a good start on the November issue, since I have three articles that didn't fit in this issue. However, we are always looking for new authors. If you have a product you have purchased that you want to tell others about, write a product review. If you've gained experience in using a word processor, database, spreadsheet, graphics tool, language, or whatever, how about a tutorial to help others along the path you've already mastered. Occassionally, when I get products to review, I like to pass them on to competent reviewers. You can establish your competency by writing some reviews.

The next two months are going to be filled with activity for Atari fans. Look for an ad campaign from Atari extolling the virtures of their new computers. Much of the long-awaited software for the 8-bit Ataris will soon be making its appearance. The trickle of ST Software will soon become a torrent. And you, fans in the Washington area, will be able to enjoy all of this first-hand.

On October 12, you can see the new Ataris as well as other computers on display at the Computerfest '85 at the Greenbelt Hilton. The very next day, October 13, at the NOVATARI Meeting, I have just confirmed that we will be privileged to host Neil Harris, the editor of Atari Explorer, and Dave Duberman, the Atari User Group Coordinator, at the regular NOVATARI October Meeting. (See below). Everyone is invited to meet Neil and Dave who will be bringing along the latest in Atari releases including the much-awaited AtariWriter Plus, Silent Butler, and Proof Reader as well as some new exciting programs for the ST line. One month later, NOVATARI, in conjunction with the Fairfax County Adult and Community Education program will be hosting ATARIFEST '85 at the Fairfax High School. Expect to see all the latest Atari programs and equipment being demonstrated at the ATARIFEST including, if at all possible, the fantastic CD ROMs.

==========

To All WAACE Members:

!!! SPECIAL NOTICE !!!

On SUNDAY, OCTOBER 13, 7 p.m.

Meet:

Neil Harris

Editor of ATARI EXPLORER

and

Dave Duberman

Atari User Group Coordinator

at the NOVATARI OCTOBER MEETING.
Meeting held at Washington Gas Light,
6801 Industrial Road, Springfield,
Virginia from 5:00 - 9:00.

==========

Letters to the Editor

Dear Joe,

Would you elaborate a little more on one area of your review of PaperClip which appeared in the July 1985 issue of CURRENT NOTES? In the fourth paragraph of your critique the difficulty in setting pagination in the midst of a work is stated. You indicate that a caller had spent 5 hours trying to get the feature to work. (I quit after three!)

You write: "Since I had already done that [got it to work] in my experiments, I assured him it could and gave him a sample text file that did it."

It would have been nice to see that suggestion appear in the review itself. As it is I am herewith requesting that information be sent to me.

I needed to add pages 3 and 4 to a document, the first two pages of which were not to have footers and page numbers printed on them. No matter how I tried, and I used a number of combinations of codes, I could not get page 3 to appear in a footer on the third page and a page 4 to appear in its footer. What should I do to get the desired results?

Robert L. Marrott
Bloomington, Indiana

Dear Robert,

Sorry about that omission; I should have known others would have had trouble too. To set a page number, you would enter CONTROL plus Z followed by the letter N followed by the page number you want. If ^ represents the CONTROL key, the appropriate expression to set page 3 would be: ^ZN3. If you want the page number to appear in a footer starting on, say, line 63, you would use this expression: ^ZF63Page ^N. The word "Page" would be printed on line 63 followed by a space and then the actual page number (^N). The tricky part is where you place this. If you set the page number and define this footer anywhere in the text after the start of page 3, it should work fine. You find the start of page 3 by using an explicit page break (^T), or by just looking at the formatted text to see what is printed on that page.

If you want the page number in the header rather than the footer, than the page number has to be set before anything is printed on the page. For example, suppose you had some text that you wanted to print with a starting page number of 4 and you wanted to print that page number in the header. The very first line in your file would have to set the page number and then define the header. The first line would look something like this: ^ZN4^ZHPage ^N .

Experiment with these commands and see if you can't get it working the way you want. When it is working, you can switch to fancier headers or footers as appropriate. Hope this helps!

Joe Waters

ATARI SCUTTLEBITS

by Bob Kelly

Atari/AT&T

The "big" news, of course, is the negotiations between Atari and American Telephone and Telegraph (AT&T). Neither company would publicly comment on the present state of the talks, but privately, officials in both companies have reportedly confirmed the negotiations. According to the report in the Washington Post on September 6, 1985, "...The negotiations reside at the point where AT&T is in the process of checking whether Atari is technically capable of delivering its computers at a sufficiently low price." However, the following day a report in the Wall Street Journal stated that AT&T denied any negotiations were underway with Atari regarding hardware licensing arrangements.

For the moment, let's assume that such an agreement occurs. There is no doubt Atari would benefit the most in the short run. An improvement in Atari's cash flow position plus the positive publicity from a business association with AT&T is definitely a sales and corporate morale builder. Considering it occurs at a time when the personal computer market is in an economic slump is no insignificant feat for Jack Tramiel to pull off. On the other hand, it would provide significant benefits to AT&T in the long run since they could enter the market immediately with minimal capital outlay and a proven system.

The questions that flow from such a proposed joint business venture are almost as intriguing as the initial agreement itself. A few of the more interesting might be. How would Atari's current ST Operating System (TOS) fit into AT&T's plans? Is the future UNIX? Would the 520ST and/or its successor be the computer for AT&T's home computer communications system long predicted by market analysts? The speculation on AT&T's strategy can now only increase.

In any event, Tramiel may have another success. Assuming the negotiations succeed, this could rank as one of his most brilliant moves. Tramiel will once again confound those market analysts who predicted Atari's demise as well as reluctant software developers who will now jump on the wagon.

Marketing Software (How not to - a case study)

OSS is one of the premiere software developers from a technical perspective for the Atari computer. It's new product, BASIC XE, was designed to take advantage of the 128K memory in the 130XE and is the most advanced BASIC on the market. Simply put, BASIC XE is an enhanced BASIC interpreter replacing the BASIC that Atari supplies. According to the rumor mill, BASIC XE was to be a mirror image of OSS's BASIC XL. In fact, some users lobbied/hoped that Atari would convert to BASIC XL instead of the revision "C" BASIC that presently comes with Atari computers. Alas, this did not occur.

BASIC XE has been on the local market since late August. Let me point out a few things:

1. Do not buy version 4.0 since it has serious bugs. Version 4.1 is relatively bug free and available.

2. BASIC XE comes with a cartridge and disk, both of which must be loaded to fully utilize all functions (22K of BASIC). It appears that the introduction of the disk is to allow for low cost upgrades as bugs are uncovered (as they have been). Thus, the more costly ROM cartridge retrofit is avoided.

3. The file BASICXE.OSS has to reside on every disk at boot time to utilize some of the enhanced functions. This file is called by the cartridge and thus will not work with the standard Atari BASIC.

4. BASIC XE differs from BASIC XL in that some of the more useful operations have been moved to disk from cartridge in the XL version. Further, the new cartridge itself is different - it is glued together. I guess the physical change in the cartridge was intended to reduce pirating and cost.

Technically, the product is superior to the standard Atari BASIC. This certainly is no surprise. However, I, as well as others, have a major problem with the design of BASIC XE. Booting a disk, loading a cartridge and making sure the file BASICXE.OSS is on the disk is a pain -- particularly when making those frequent minor adjustments to a program. This is a system created by technocrats, not a marketing person. By the time all the operations are performed, it's bedtime for Bonzo. Forget it! I will stick with the BASIC I have been using all along.

The way to handle this situation was for OSS to incorporate all operations into a cartridge. Cost considerations seem to have outweighed this option at the start. In my opinion, cartridge only would have made marketing the product a lot easier, increased sales, and created a larger user base permitting more sophisticated BASIC programs in the public domain. Sadly, this marketing failure has been OSS's problem with other products as well (Writer's Tool). It probably is too late to change the production line for BASIC XE. What a shame!

Computer Industry Forecasting

Generally when people refer to the computer industry, they, in fact, are referring to two distinct markets - home and business.

Sales to the home market continue to decline as they have since 1983 when they peaked at roughly 4.4 million units. Home sales in 1985 are estimated at 3.3 million units. In all likelihood, the heyday for home computer sales, in terms of number of units sold annually, is past. Also, it is important to recognize that a growing percentage of home sales are individuals upgrading their

Sales to the home market continue to decline as they have since 1983 when they peaked at roughly 4.4 million units. Home sales in 1985 are estimated at 3.3 million units. In all likelihood, the heyday for home computer sales, in terms of number of units sold annually, is past. Also, it is important to recognize that a growing percentage of home sales are individuals upgrading their existing systems, not new users who generate additional product demand for peripherals.

In sum, most analysts view the home market as stable, not one of rapid growth. This is a correct assessment but one that means competition will intensify with the potential for another manufacturer to drop out - indeed one will go and it will not be Atari in my opinion.

On the other hand, sales of computers for business use have risen significantly and many project them to rise further in 1985. According to Future Computing Inc.'s optimistic outlook for the market, sales will rise by 40% in 1985.

Ah.....the final word on 1985? Well, maybe not, but let's go one step further.

A company's ability to expand, modernize, or to market a new product line is determined by its ability to attract investment capital. A debt to capital ratio expresses this ability by measuring total debt as a percentage of invested capital. Simply put, a high or growing debt to capital ratio alerts investors or creditors (e.g. Banks) that a firm or industry may be experiencing difficulties.

The table below illustrates the debt/capital ratios for several industries.

Debt Ratio's by Industry*
(1983/84 Average - % change)

Real Estate & Housing	62.5
Airlines	62.0
Utilities	51.0
Office Equip/Computers	23.0
Electronics	21.0
Aerospace	18.5

*Sources: Standard & Poors & Wall Street Journal

As can be seen from the table, the computer industry has a relatively low debt/capital ratio. If this is the case, why are banks and venture capitalists pulling out of this market completely or sharply curtailing loans, etc. Well, it's obvious that this industry has a high risk factor in that so many of the companies are essentially one product firms. In addition, a further look at the data provides the final insight.

Debt/Capital Ratios - Computer Firms
(1984 data - % change)

IBM	12%		Control Data	46%
Sperry	25%		Wang	36%

Other than IBM, the debt/capital ratios for the other three selected computer firms in the table above is higher than the average for the industry. Furthermore, the ratios rose in 1984.

Now, recall that many forecasts called for a substantial sales increase in 1985. On the other hand, banks and venture capitalists are pulling back from the computer industry as debt/capital ratios are rising. I think you have the point by now. Simply, the people that provide the investment funds to the industry don't have an overly rosy outlook despite the forecaster's predictions . I believe sales for 1985 will not jump as dramatically as forecasted and sales for the first half of 1986 could be a real downer.

In this climate, the ability of many computer manufacturers to reduce prices is severely limited since the profits are needed to pay off existing debt. The lone exception to the rule is, of course, IBM. It would appear that IBM, if it were to engage in a price cutting market strategy, could force several major computer firms to the wall. One of the few competitors capable of countering such a strategy by IBM is AT&T. AT&T earned a profit of $1.9 billion last year and a tax refund of more than $240 million. So Atari's potential relationship with AT&T could be very important to its survival and now ..... you know the rest of the story.

Prompt Removal ?

[Thanks to Richard Kashner of JACG for these two notes.]

When you use the INPUT statement in a BASIC program, the computer includes a question mark on the screen. There may be times when you would rather not have the question mark present, since you can then tailor the display more to your liking. The question mark comes because you are automatically using Channel #0 for an INPUT statement. You can get around this by using "INPUT #16", rather than "INPUT". This prevents the appearance of a question mark, and does not require you to have used any OPEN statement to set up this "Channel #16". Why? Well, BASIC checks the channel number. If there is none, then Channel #0 is assumed. Next, BASIC multiplies the channel number by 16, discards multiples of 256 and checks for a result less than 128 (to prevent the use of channels 8 to 15). In the case of 16, BASIC gets 16*16=256 and subtracting 256 gives 0. Since the result is 0, no new channel is opened! But since it initially found a value other than 0, there is also no question mark prompt! This is an interesting and potentially useful bit of information from the Starfleet Atari (Colorado) group.

A graphic demo of interest (takes time, be patient):

```
0 GRAPHICS 24:SETCOLOR 2,0,0:COLOR 1
20 FOR X=0 TO 5517:SQ=X*X*2.0E-3
30 XCOORD=INT(SQ/191): YCOORD=SQ-XCOORD*191
60 PLOT XCOORD,YCOORD: NEXT X
80 GOTO 80
```

Learning Through LOGO

by Susan Wolff

Why LOGO?

Another school year is upon us! Everyone has laid in their supply of crazy glue, looseleaf paper, and pencils. This year, in several classrooms I know, when the teacher sent home the supply list, it included a 5 1/4 inch floppy disk. This may surprise many parents, however, teachers are becoming more aware of the computer's potential in the classroom. The cause of this phenomenon stems from two beliefs:

The first belief is that computer literacy is no longer enough. Teachers also want to use the computer as a tool to help children learn their basic subjects.

The second belief is that LOGO is the best tool educators have had in a long time. Training relative to its application is spreading.

The reasons for the interest in LOGO at the elementary school level have stimulated much debate. The argument about whether to use LOGO or BASIC in the elementary schools is not a new one. BASIC has been around for a long while, and probably came with all of your machines. You too may have wondered, "Why mess with success? Why not just stick with this popular language?"

The reasons are numerous. As an elementary school teacher, I can sum up for you some of our most important goals for your children, whether on- or off-line.

On top of this list you would find the goal of teaching children what to do when they are faced with a problem. Knowing all the number facts in the world won't help them if they can't take that first step toward problem solving. It has always taken children a long time to even discover that most problems can be broken down into a series of small steps. LOGO facilitates this discovery. The whole process of using LOGO lends itself to breaking problems down into bite-sized pieces. If, for instance, you wanted to make a face on the computer, you don't have to tackle it all at once from line 10 to line 720. You can write a procedure that will draw an eye. You can write a separate procedure that will send the turtle to two different locations and use the eye procedure. Each part of the face can be a different procedure. In the end it all gets put together in a superprocedure using the correct sequence.

Which leads me to another goal we work on in school: sequencing skills. We want children to increase their ability to put things into a logical, sequential order. LOGO is a wonderful tool for this. Because it is such a modular language, when big tasks are broken down to little tasks, putting the procedures into a logical sequence is exactly the kind of practice needed for this important goal.

LOGO's modularity also lends itself to having a small group of children, or a class, divide a large challenge into manageable pieces, and each do a part of the work. If, for instance, the class wishes to design a quilt on the computer, each small group of children can design a small square for the quilt. Then several children could be assigned the job of setting up a superprocedure which would locate all the various squares in their proper places. Besides all the mathematical concepts involved in a project such as this, the critical thinking skills developed are substantial.

All in all, learning BASIC in the elementary school, while providing a challenge for the children, does not support the teaching of these particular skills the way LOGO does. Although a BASIC program may be written sequentially, it cannot be broken down to small manageable parts such as procedures. Of all the languages available at this time, none of them puts small children in control of the computer as easily as LOGO.

At this point, my new Learning Through LOGO class is beginning to try their hand at writing procedures and superprocedures. Soon they will be trying to write programs containing graphics and text to share knowledge they have gained in various subjects such as social studies and science.

For now I would like to leave you with another program written by last year's L.T.L. class (10 year old children). This particular program was written after a lesson on nouns, verbs, and adjectives.

```
TO MAD4
TS CT REPEAT 4 [PR []]
PR ( SE " " " " " " " " " ["THE PREAMBLE"])
PR []
PR []
PR ( SE [WE THE] :PNOUN1 [OF THE UNITED STATES, IN ORDER
TO FORM A MORE PERFECT] :NOUN1 [, ESTABLISH JUSTICE,]
:VERB1 [DOMESTIC TRANQUILITY,] :VERB2 [FOR THE] :ADJ1
[DEFENSE, PROMOTE THE] :ADJ2 [WELFARE, AND SECURE THE
BLESSINGS OF] :NOUN [TO OURSELVES AND OUR POSTERITY, DO
ORDAIN AND ESTABLISH THIS CONSTITUTION FOR THE UNITED
STATES OF] :COUNTRY [,] )
PR []
PR []
PR []
PR []
PR [IF YOU WOULD LIKE TO SEE THIS PROGRAM AGAIN TYPE <
MAD.LIB4 > AND PRESS RETURN.]
END


TO WORDS4
TS CT
PR []
PR [MAY WE PLEASE HAVE A PLURAL NOUN?]
MAKE "PNOUN1 FIRST RL
PR [] WAIT 50
PR [HOW ABOUT A NOUN?]
MAKE "NOUN1 FIRST RL
```

```
PR [] WAIT 50
PR [LET'S TRY A VERB, O.K.?]
MAKE "VERB1 FIRST RL
PR [] WAIT 50
PR [YOU'RE DOING GREAT.  LET'S HAVE ANOTHER VERB.]
MAKE "VERB2 FIRST RL
PR [] WAIT 50
PR [NOW WE WANT AN ADJECTIVE.]
MAKE "ADJ1 FIRST RL
PR [] WAIT 50
PR [NOW ANOTHER ADJECTIVE, PLEASE.]
MAKE "ADJ2 FIRST RL
PR [] WAIT 50
PR [A NOUN, PLEASE.]
MAKE "NOUN FIRST RL
PR [] WAIT 50
PR [LAST, BUT NOT LEAST, A COUNTRY, PLEASE.]
MAKE "COUNTRY FIRST RL WAIT 100
END
```

```
TO INTRO4
TS CT
REPEAT 4 [PR []]
PR [THIS IS A MADLIB BY TEAM 4, MARK GOODWIN, JULIE
GALLAGHER, AND MICHAEL FEENEY.]
PR []
PR []
PR [PRESS <RETURN> TO CONTINUE]
MAKE "ANSWER RL
END

TO MADLIB4
INTRO4
WORDS4
MAD4
END
```

Tips'N'Traps

by Stevenson, Francese and Burke

Well, there haven't been too many messages this time, but they are getting a little more interesting. HITCH-HIKER'S GUIDE TO THE GALAXY seems to be the popular subject this month, so let's start off with that.

HITCHHIKER'S GUIDE TO THE GALAXY

Q. Does anyone know how to get past the Bugblatter Beast, the party, or the boat with Zaphod in Hitchhiker's Guide to the Galaxy? I can't seem to get past them.

-DEAN EDWARD MILLER

A. Have managed to escape all three, Dean.
The Party: Check out everybody carefully! Remember the significance of certain innocuous items to the game, package, and story(?).

The Beast: The beast is stupid! It can't see you if you can't see him. Also, it carves the names of its victims in stone.

The Boat: Remember the Sirius Cybernetics Corp.? Their products seldom work, at least the way they're supposed to. Sometimes they almost do the opposite they're supposed to. (Almost).

-RICHARD GUNTER

Q. I haven't figured out whether one is supposed to get away with the particle of common sense, or not.

-RICHARD GUNTER

A. You have to get it, or else you will never get out of the maze.

-BARRY BURKE

Q. I need more explicit guidance. I've already put the towel on my head then I can't do anything else. Also, how do I get past the War Room?

-DEAN EDWARD MILLER

A. This one rivals the Babel Fish. When you first arrive in the Beast's lair, he/it threatens, and demands your name. Tell him. Then, don't hesitate; hustle outside to the memorial. Pick up a sharp stone, then wrap the towel around your head. This will buy you enough time to write your name on the memorial. The Beast takes a nap. This gives you a bit of time to explore...

As for the War Room (on the microscopic fleet), the only way out is to, well, start the game at a much earlier point. Remember the dog outside the pub? He eats the fleet, right? Feed him. Infocom is a sneaky group, aren't they? If you didn't figure this out the first time around, you'll have to repeat a lot of work... Cheer up. Never heard of anyone who figured out the dog bit on the first crack.

-RICHARD GUNTER

Q. I got to the memorial and the stone but I can't carve my name with a towel wrapped around my head. On the boat, I can get to the dias and get the guards to drop their guns but when I try to go for the Heart of Gold, I get shot.

-DEAN EDWARD MILLER

A. Carving: Oh yes, you can. Keep trying variations. Boat: This one's funny. The guards aren't too bright, so they can be had. Gotta admit, it took my 13-year old son to find the answer to this one...

-RICHARD GUNTER

THE HOBBIT

Q. Anyone play the hobbit? If you do, what do you do with the bard???

-"JASON"

ZORK I

Q. Ok all, I finally made a huge step in ZORK I. I went from 80 to 236 points in a single night! Now, I'm stuck again! I killed the thief, got the book, candles, bell, platinum bar, trident, coal, timber and other related items. What do I do now? How do I get through the thin crack in the timber room with a light? how do I read the 'other page' in the book (you know, half of it is missing. I tried ringing the bell at hell's gate and the mother burned me! Also, how do I make the candles longer/light table?) How do I get the scarab? Or more specifically, how do I get out of the hole after I get the scarab?

-BARRY BURKE

If anyone has answers to the previous two questions, put them up on ARMUDIC (703) 569-8305 or pass them on to any of us and we'll include them next month.

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Action! Action

by Ed Seward

I recently added four new ACTION! disks to the NOVATARI library. These notes are offered to help current and potential ACTION programmers understand what is there. To use the four disks described below you must have the ACTION! cartridge from OSS, although there are a few graphics demos that don't require the cartridge. WAACE members can get this entire set for only $12 plus shipping.* If you enjoy using ACTION!, these disks should prove very helpful to you. If there is enough demand for these disks, several more ACTION! disks can be added to the library.

ACTION! Graphics Demo. This disk contains fourteen graphics demos, thirteen of these are in ACTION! source code. The one without source code is the 'STAR WARS'-type text -- FADE.COM. Several of these have been compiled with the ACTION! Runtime Library.

ACTION! Utility Programs. There are eight files on this disk. All but DOS3TO2.ACT were downloaded directly from Clinton Parker's BBS. As most of you know, Clinton Parker is the original creator of the ACTION! language. Four of the files are by Harold Long: UTILITIES.DOC, FORMAT.ACT, HEXASEG.COM and LIBSCAN.COM. UTILITIES.DOC is the documentation for the other three files. FORMAT.ACT properly indents DO-OD and IF-FI loops. HEXASEG.COM converts binary load files into code blocks for inclusion in ACTION! programs. LIBSCAN.COM determines which portions of the ACTION! Runtime Library are needed. This is great for minimizing the size of the object code. CMPTODSK.ACT is a Clinton Parker program to allow one to compile straight to disk. DOS3TO2.ACT converts DOS 3 files to DOS 2. EPSON.ACT is a program/file lister for EPSON compatibles that prints graphics and inverse characters. And finally, ACTDEFS.ASM is the ACTION! cartridge equates. If you do much programming in ACTION! then you will find this disk very useful.

ACTION! Modules #1. Among the twenty-six files on this disk are three text files: ANOTE1.TXT, ANOTE2.TXT and ACTMANAL.TXT. The two ANOTEs document the bugs in cartridge versions 3.0 - 3.5. ACTMANAL.TXT covers some errors in the first version of the manual.

Four of the files also come on the ACTION! Runtime Library disk: ST.ACT, ST.DOC, BIGST.ACT, CATCH.ACT. The ST.ACT and DOC is for listing the symbol table -- variable and subroutine names. BIGST.ACT gives one a bigger symbol table which is usually necessary when writing a good size ACTION! program. You should load, compile and run BIGST.ACT before loading in your file(s). CATCH.ACT is for catching errors -- similar to TRAP in BASIC.

BLKIO58.ACT should be renamed BLKIO.ACT, but I use the 58 to show that this is Clinton Parker's May 8,1985 version of BLKIO.ACT. This is great for moving large blocks of data to a disk drive or casstte. Below is a list of the other files on the disk:

FIRST.ACT - contains subroutines: LegalDrive, MaskInput, UnMask, Find
AUTO.ACT - automatic word wrap in ACTION! editor
FREE.ACT - adds command to display free memory in ACTION! editor
ESCAPE.ACT - is a graphics demo that I thought was something else
REALS.ACT - gives one real numbers and routines. Documentation is provided in the file REALS.DOC.
LODPT.ACT - reads executable files to see where segments load and find entry points
LOAD.ACT - loads and executes ACTION! routines
SIODISK.ACT - file to setup read and write sector routines
SORT.ACT - sort routine written in M/L a a code block
SORT.DOC - doc's plus a graphics demo 256.ACT
ASSEM.ACT - pseudo assembler for writing code blocks. Documentation provided in the file ASSEM.DOC.
END.ACT - clean end of ACTION! programs
RUBINGEN.ACT, RELGEN2.ACT, RELOC2.ACT - these three modules are used together to generate relocatable files.

ACTION! Modules #2. There are eighteen files on this disk... This disk has fewer files than Modules #1 because of the size of PICPASTE.ACT. PICPASTE.ACT allows one to cut and paste while working on two graphics screens. This is another great program by Harold Long. This program alone jusifies the cost of this disk. The other files on the disk are:

PICPASTE.DOC - cut and paste with two graphics screens.
WINDOWS.ACT - window demo program
TIME.ACT - accessing the clock
RANDOM.ACT - random CARD function
RAMXL.ACT - accessing the RAM under the XL OS. Documentation is provided in RAMXL.DOC
EXIT2DOS.ACT - exit program and go to DOS
DIVC.ACT - CARD FUNC DivC
PRINTCH.ACT - print graphics characters, Gemini printer. Documentation is in PRINTCH.DOC.
DENSITY.ACT - change drive density
CIRCLE.ACT - draw a circle without trig functions
DLIEXAM.ACT - Display List Interrupt (DLI) example
READPIC.ACT - read picture data files
READPIC.MAC - assembly language version of ACT file
READPIC.DOC - picture data formats
GRTONE.ACT - also by Harold Long, 800XL and Epson printers, half-tone screen print

If you have an interesting or useful ACTION! program that you would like to submit for a future disk -- send it on a disk to me. I'll return the disk complete with your choice of any of the above ACTION! disks. Those interested should send their source code to: Ed Seward, P. O. Box 6826, Alexandria, VA 22306.

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* Order from M. Evan Brooks, 4008 Patricia Street, Annandale, VA 22003. Cost is $3/disk. For postage, add $1 for every 3 disks.

ARF! ARF!

[Marshall Abrams ran across this little article and thought all you "downloaders" might be interested. Ed.]

(8/15/85 Wall St. Journal). Richard Streeter's bytes got bitten by an "Arf Arf," which isn't a dog but a horse.

Mr. Streeter, director of development in the engineering department of CBS Inc. and home-computer buff, was browsing recently through the offerings of Family Ledger, a computer bulletin board that can be used by anybody with a computer and a telephone to swap advice, games or programs -- or to make mischief. Mr. Streeter loaded into his computer a program that was billed as enhancing his IBM program's graphics; instead it instantly wiped out the 900 accounting, word processing and game programs he had stored in his computer over the years. All that was left was a taunt glowing back at him from the screen: "Arf! Arf! Got You!" "HACKERS" STRIKE AGAIN

This latest form of computer vandalism -- dubbed for obvious reasons a Trojan Horse -- is the work of the same kind of anonymous "hackers" who get their kicks stealing sensitive data from government computers or invading school computers to change grades. But instead of stealing, Trojan Horses just destroy all the data files in the computer.

Trojan Horse creators are nearly impossible to catch -- they usually provide phony names and addresses with their programs -- and the malevolent programs often slip by bulletin-board operators. But they are becoming a real nuisance. Several variations of the "Arf! Arf!" program have made the rounds, including one that poses as a "super-directory" that conveniently places computer files in alphabetical order.

Operators have begun to take names and addresses of electronic bulletin-board users so they can check their authenticity. When a computer vandal is uncovered, the word is passed to other operators. Special testing programs also allow them to study the wording of submitted programs and detect suspicious commands.

INTERFACER BEWARE. But while Al Stone, the computer consultant who runs Long Island based Family Ledger, has such a testing program, he says he didn't have time to screen the "Arf! Arf!" that bit Mr. Streeter. "Don't attempt to run something unless you know its pedigree," he says.

That's good advice, because the computer pranksters are getting more clever -- and nastier. They are now creating even-more-insidious programs that gradually eat away existing files as they are used. Appropriately enough, these new programs are known as "worms".

Washington Area BBS Numbers

If anyone has any updates or corrections to these numbers, please contact Michael Focke (703) 620-2776.

Washington DC (202)

BYTE SHOP.....342-0479
CONNET (FOREM).....966-4494
CPEUG CBBS.....948-5717
GRAVEYARD.....396-4137
MAYBERRY MADNESS BBS.....574-1416
UNITED FEDERATION OF PLANE 362-8984

Maryland (301)

APPLIED COMPUTER ASSOC.....948-0792
BANKATARI.....323-1341
BEST LITTLE BBS.....948-0981
CAL COM.....681-8933
CAMELOT.....843-0858
CLASSIFIED BBS.....871-7978
COMMODORE MANIA!.....251-0599
DERANGED EXCHANGE.....236-9418
DIVING BOARD.....788-3539
DRAGONFIRE BBS.....279-9110
EAGLES NEST.....949-1524
EXCALIBUR.....949-6781
F.A.C.E.....253-1836
FLAGSHIP.....568-4565
FOREM.....474-7591
FORUM.....552-2573
FUNHOUSE BBS.....540-8379
INSANE ASSYLUM.....262-9563
JS COMPUTING.....461-2136
JUDGE'S CHAMBERS.....774-5110
LAUREL RCP/M.....953-3753
LUCK OF THE IRISH.....871-7339
NAMELESS.....258-8392
OFFICER'S CLUB.....978-3890
PRISON.....261-4713
REALM OF NINJA.....460-9594
S.M.A.U.G.....932-6019
SANDS OF TIME.....340-0182
SARGASSO VORTEX.....593-6246
TOWERS OF DARK.....656-3401

Virgina (703)

ARMUDIC.....569-8305
ATTIC.....471-1809
BUCKINGHAM DATA.....569-1949
BUNGLING EMPIRE BBS.....574-9464
CLUBHOUSE.....364-8617
COVER'S CAVE.....451-0297
DISCS OF TRON.....573-5947
ESPIONAGE.....241-0129
FIREFALL.....765-2491
GALLIFREY.....256-3223
INFOEXXX.....843-5121
KITCHEN.....768-2632
MAGICLAND.....654-8196
MAGUS/ABBS.....471-0610
MAX MOSS HOTLINE.....683-3944
MERLIN'S LITTERBOX.....250-7303
METAL SHOP BBS.....241-0129
MOBIUS STRIP.....893-9358
MOS EISLEY.....620-2784
N.C.A.U.G.....569-8305
NOVATARI.....569-8305
OLDE TOWNE EXCHANGE.....548-0533
OFFICER'S CLUB.....978-3890
PADDED ROOM BBS.....455-2697
PIRATES PLANK III.....843-7874
PIRATES PLANK IIII.....356-2242
RED CABOOSE.....620-5309
SECRET BBS.....360-9394
SWITCHBOARD.....765-2161
TEMPLE OF SYRINX.....273-6277
TYSON'S CORNER.....893-0874
VULGAR UNICORN.....360-0513
WHITE SANDS BBS.....425-1234
GROUND 0 BBS.....362-8984

Other BBS of interest:

A.N.A.L.O.G..TCS.....617-892-1446
ATARI, INC..BBS.....408-745-5308
COMPUSERVE.....703-352-7500

GOING ONLINE

by Ed Seward

Since this column started I've examined several terminal programs. This month I am going to briefly cover when to use several of them.

ARMUDIC and other ATARI BBS's. The current favorites are AMODEM6, AMODEM7, PROTERM, and HOMETERM. (Another public domain terminal program that has only been available for a few days as I write this is 1030 EXPRESS). The first three and EXPRESS are available on ARMUDIC. All five work with the 835/1030 modem. All but PROTERM and EXPRESS work with 850 based modems. MPP users can use AMODEM7 or HOMETERM. Let me remind you that all of the above EXCEPT for HOMETERM support auto-redial. Auto-redial is in my opinion a necessity for accessing the good boards like ARMUDIC. AMODEM 7.1 and 1030 EXPRESS will dial through a list of BBS until you reach one of the boards.

CompuServe. In addition to the programs mentioned above there are two programs written specifically for Compuserve; MSCOPE and TSCOPE. TSCOPE is for 850 based modems and 835/1030 modems. MSCOPE is for the MPP modems. TSCOPE supports the VIDTEX graphics and the Compuserve 'B' protocol. It used to be that one had to use TSCOPE to download files with a "BIN" extender in the filename, but I have had very little trouble downloading those files using XMODEM. (XMODEM is faster than the "B" protocol). To read mail and messages practically anything will work.

Translation?. To take full advantage of your Atari's capabilities - set your terminal software for ATASCII translation when signing on to ARMUDIC and most other Atari boards. Some boards, such as those running the Bulletin Board Construction Set (BBCS), can't work with ATASCII and request you to set your translation to ASCII. (Most programs use 'T' for Translation to toggle between ASCII and ATASCII while accessing their functions menu). As a quick reference I am including the table below.

Modem Type	ARMUDIC	COMPUSERVE
850	AMODEM7	AMODEM7/TSCOPE
1030/835	AMODEM7/PROTERM	PROTERM/TSCOPE
MPP	AMODEM7	AMODEM7/MSCOPE
Translation	ATASCII	ASCII

Handlers. Another topic I am going to cover briefly is which handler or device controlling program to use with which piece of software.

Many of you have probably heard about Russ Wetmore and Joe Miller's "R.BIN" handler for the 835/1030 modems and 850 based modems. There is another version of this handler from ICD called R1030 and RM that is more flexible in it's relocatability. This means that you can use the handler with a wider variety of DOS's. AMODEM7 can use any of the above handlers or the older "T:" handler with 835/1030 modems. (The "T:" handler was the first public domain handler for the 835 modems and was taken from TSCOPE. However, R.BIN or RM are used much more frequently and are easier to find now).

For MPP users there is of course the handler supplied by MPP (SUPRA). There are also three Chilicott public domain handlers: HMDRIVER, RMDRIVER and SMDRIVER. There are about 10 pages of documentation to go with these handlers in the file MPPHNDLR on ARMUDIC. The HMDRIVER is for use with HOMETERM. The RMDRIVER is an R: handler for the MPP and SMDRIVER is supposed to let the MPP work like a Hayes Smartmodem.

Some Closing Thoughts. How would I summarize all of this? Well, I still consider HOMETERM to be about the best terminal program - except for a few needed enhancements that are supposed to be in the second release. This release was originally due out in June but has been postponed to the Fall. Considering the features of AMODEM7, PROTERM and 1030 EXPRESS; I recommend waiting for the second release of HOMEPAK to purchase HOMEPAK.

For those just getting into telecomputing I recommend starting out with AMODEM7. The others have 'features' that are better not put up with while one is getting comfortable with their modem.

In the forthcoming months I plan to: compare the features of AMODEM7, PRO*TERM and 1030 EXPRESS; do a tutorial on navigating on Compuserve's SIG*ATARI while minimizing your time online.

CLASSIFIED ADS

RIXON 212A/IM 300/1200 Modem, HAYES compatible PLUS 175$ Used, Guaranteed 800-368-2764. I have used them and they work just like the Hayes except for no lights and speakers. I have over a hundred at work and they are OK. Made in Silver Spring, Md. Michael Focke.

Eleven new 820 printer ribbons and eleven new rolls of 820 paper. Sacrifice all for $30. Call (703) 522-2000. Ask for Scott.

Selling Atari 800XL (to buy 130XE). Unit hardly used, excellent condition; $55; will give buyer choice of free software from my extensive disk library. Call David Beifeld (703) 476-5920.

HELP. I have several pre-school/kindergarten and other BASIC programs I have written which are stored on tape. My 800 will no longer drive a tape recorder and I have no desire to have it repaired just for these programs. If someone will dump the programs onto disk for me so I can use them, I will be happy to provide them with copies of the programs. I live in Falls Church just off I-66. Call Jim at 533-1754.

[Classified ads are free to WAACE members. Send copy to Editor before 12th of preceding month.]

ANTIC'S LONDON REPORT:

by JAMES CAPPARELL, Publisher

ST RULES BRITTANIA
UK SOFTWARE AHEAD OF USA

9/8 - This article is being written on a Pan Am flight returning to San Francisco from London. What did we learn overseas? Well, there's five pence to a shilling...the people are extremely nice and the enthusiasm for Atari is excellent. But the weather in London is awful and pubs close at 11 pm.

Our most exciting discovery was the extreme enthusiasm for the Atari ST we found at the Personal Computer World Show held September 4-8 at London's Olympia Hall. Over 50,000 people got their first opportunity to see the 520ST and the 130XE. This was the eighth show sponsored by Personal Computer World Magzine so far, and by all reports it was the most successful. The Atari booth was one of the largest and best attended at the show. In the UK and European market, the ST looks like a strong winner.

In the UK and European market, the ST looks like a strong winner.

Suprisingly, our British cousins have a leg up on developers in the States with stunning ST systems software, business software and games all ready for market. Perhaps because they are used to programming for the Sinclair QL, a 68008 machine, they were primed and ready for the ST. The QL was a big disappointment with its small memory and slowness. So for Britons, the ST seems like the QL that never was. And the British are much more open to developing for a new, unproven machine than American companies are. Big Blue Mania has not set in, as the British think the IBM line is far too costly.

Atari Corp. was well represented with a large contingent from the states. Jack and Leonard Tramiel, Sig Hartmann, Sig Schreyer and Shiraz Shivji flew in from Sunnyvale. Additional support from Atari UK, (an excellent organization, I might add) came from Les Player, Robert Katz and Jon Dean. I was pleased to also see German, Swiss and French Atari representatives.

We found some excellent languages and software products you will soon see from the Antic Catalog or other publishers. These included accounting and small business packages, LANs and a possibility of UNIX. We saw several languages including UCSD and ISO Pascal code compilers (very professional, very fast), super-fast macro assembler-editors, Lattice C, Cambridge Lisp, MODULA II, FORTRAN 77, and CPM 2.2 emulation.

For you telecom buffs, it's interesting to note that the first truly Hayes-compatible modem for the Atari was introduced at the show. It costs 399 pounds and contains six different protocols, including two for videotex graphics -- the one area in telecommunications where the English have a significant lead on us.

An animated game called Brattacas from Psygnosis Ltd. drew major crowds at the show. It had already been in development for the past two years on SAGE 68000 systems. So it was ready to be ported to the Atari ST and was brought to beta level just a few weeks ago. Brattacas features cover art by fantasy artist Roger Dean. Better than arcade quality color characters move in a sophisticated scenario where the 520ST's graphics capabilities are exploited more than in any other program we've seen so far.

In an enclosed glass room was a 260ST with one megabyte of RAM. Basically, it was a 1040ST with a built-in floppy, but still a prototype. Alongside it, a 520ST with color monitor attached to a 10-megabyte hard disk was displaying pictures at blinding speed during the entire show.

As an interesting twist, an Israeli political carteonist, Yakov Kirschen , (famous for his "Drybones" character in the Jerusalem Post) was featured in a front page article in the Sunday London Times. In the photograph, he was showing a 520ST interactive cartoon character which demonstrated how artificial intelligence can be applied to computers. His character can actually relate to the user.

Other Atari products at the show, not just what was shown at the Atari booth, included a Zoids game and a demo of Jeff Minter's psychedeliC Colourspace light synthesizer for the XL/XE and the 520ST. This does for color what the synthesizer did for sound, and gives you a light show on your micro.

Antic has signed a number of publishing agreements with UK authors. This means the Antic Catalog will soon be bringing you lots of ST packages including development languages, systems software, business and productivity packages, utilities and games.

I would say that anyone who still doesn't believe that Atari and the ST are for real -- isn't for real. It's a great product at a great price (750 pounds in the UK) and has a growing list of developers. We saw a list of 450 developers in the UK alone. The day after the show closed, UK ST Product Manager Bob Katz returned to his office at 9 a.m. and found eight checks for development systems that had arrived by courier from developers who were itching to get started.

We were introduced to many fine Atari friends during our stay and were pleased to discover that our Atari community is just as enthusastic and supportive in London and UK as in the United States.

Those of us who have long been so loyal and dedicated no longer have to feel embarassed about being Atari fans. We have the fastest machine at the best cost and a growing development network.

How to Get the Most Out of CompuServe

Reviewed by Richard Swart

[Charles Bowen and David Peyton, Bantam Books; August 1984; $14.95]

The "Information Age' is upon us thanks to the declining costs of computing equipment with its ability to store and manipulate vast quantities of data in fractions of seconds. An investment of less than $100 to purchase a 300-baud modem and telecommunications software (some modems may require an interface device as well) and you, too, can be an information age pioneer in the "brave new world" of telecommunications.

WARNING - Going online may be habit forming!!

Even if you haven't yet taken the plunge, I'm sure you have heard of CompuServe Information Service (CompuServe or CIS), The Source, Delphi, and other online information services. My purpose here is not to sell you on the merits of one information service or the other, but to review a book on one of the most popular online services for Atari users, CompuServe. A key factor in CompuServe's popularity with Atari users is the very active and fast-growing Atari Special Interest Group (SIGATARI) which can be found there. Through SIGATARI, the Atari user gains access to the latest hot news and rumors, thousands of the best public domain programs for the Atari, answers to the most perplexing hardware and software problems, the ability to "chat" with Atari notables such as Russ Wetmore (author of HOMEPAK) and the opportunity to make friends with other users all across the country. As if that weren't enough, CIS (and a lot of the other services as well) offers electronic banking and bill paying, electronic shopping, news, weather, sports, financial quotations, games, educational programs, travel services and on and on and on. But in case you're worried about getting lost forever amid the 26 DEC mainframe computers and 30 billion (that's right, billion) bits of data that are the heart of CompuServe, Messrs. Bowen and Peyton have written just the book for you.

How to Get the Most Out of CompuServe is a valuable paperback tutorial and reference work for both the novice and experienced subscriber alike. The style is light and humorous and easy reading. The authors have been or are System Operators (SYSOPS) for several SIGs on CompuServe, and by their own admission have spent hundreds of hours (and thousands of dollars!) learning where all the "good stuff" is and the quickest and best ways to navigate the system. Their promise is to show the reader how to save time and money by using the system wisely. They keep their promise.

"Time is money," wrote Benjamin Franklin over 200 years ago. Old Ben was ahead of his time, and surely had online information services in mind when he wrote those words. Connect time on CompuServe is $6/hour (300 baud) for non-prime time (between the hours of 6 PM and 8 AM weekdsays and all day Saturdays, Sundays, and holidays). Charges for 1200 baud connection are about twice the 300 baud rate. Some other online services are even more expensive than CIS! You can quickly appreciate the value of expert advice on how to get the most bang for your online buck.

A unique feature of this book is a set of six online "guided" tours by which the authors help you explore the key sections of the system. Each tour will take approximately an hour of connect time, and at 300 baud rates will run you about $36 (non-prime time). Of course, if you are a new subscriber to CIS, this would be an ideal way to use the free connect time that comes with every CompuServe Starter Kit. The tours and associated hints on shortcuts are highly recommended and even experienced subscribers might learn a thing or two.

In addition to the tours, the book provides information on advanced commands and shortcuts around the system including such topics as personalizing the famous (or infamous) CompuServe menus. Almost worth the price of the book alone is an appendix called the online Survival Kit. This section includes summaries of how to make connections (log-on procedures), command compendium, trouble-shooting hints, page addresses for major services, a recommended reading list, and finally information on how to get in touch with the authors (online, of course).

As a test of the authors' credibility, I left them electronic mail on CIS advising them of my book review and soliciting any comments they wanted to make to CURRENT NOTES readers. Within 24 hours, I received a reply from Charlie Bowen which is summarized herein. First, Charlie was glad to hear that I was reviewing his book (especially since I like it!), and he reiterated that both he and Dave Peyton frequently field questions from readers via EasyPlex (CIS name for electronic mail). He went on to tell me about a new SIG forum that they're involved in. It's the Online Computer Connection Forum, which is devoted to answering questions about the CompuServe system. Just enter G OCC at any ! prompt to visit this new SIG. As for Charlie's current projects, his latest is Smarter Telecommunications which he wrote for Bantam with Steward Schneider. It's a general guide to getting more and spending less in telecomputing, from BBSs to information services to databases. Not surprisingly, you can read a description of the book and even order it online in the Electronic Mall on CIS. Just enter G BB to get to the Bantam Book "kiosk," then check out the computer book section. It's also available in the Waldenbooks area of the Electronic Mall. Enter G WB and look under general computing books.

Charlie is also collaborating with Dave Peyton on a new book titled, How to Get the Most Out of the Source (Do I detect a trend here?). This one is scheduled for an October release, so you Source subscribers can be looking for it. As for the subject book of this review, Charlie says they've been told it is the best-seller in the Bantam computer book catalog and in the top 10 of Bantam's trade paperbacks (computer and non-computer titles). Not bad, eh?

As an aside, the ability to "chat" online with the authors of this book during the preparation of this article illustrates one of the powerful lures of telecomputing. There are alot of friendly people out there who share our interests in computers, so if you want to make alot of new friends and have some fun to boot, try telecomputing.

Is there anything I didn't like about the book? Nothing of any real consequence, but a more detailed Table of Contents listing chapter subheadings and page numbers would have been helpful. ALso, any book about a dynamic system like CIS is out of date by the time it's printed. CompuServe is adding new services practically on a weekly basis, and as the system matures and expands some capabilities are changed and many new capabilities are added. The authors are aware of this problem and talk about it in their book. While the names of some of the services and some of the page addresses have changed and the current menus may not look exactly like what you'll see in the book, the basic commands to navigate the system and the authors' suggestions on using the service efficiently and economically are just as valid today as a year ago. Barring significant changes in the command library (highly unlikely), this book will remain valuable for a long time.

For more information on this topic or other telecommunications subjects, you can leave questions on ARMUDIC or attend a meeting of the NOVATARI Telecommunications SIG during any of the regular NOVATARI monthly meetings. Good luck and I hope to see you online! While you're at it, leave Charlie and Dave a message. Charlie's ID is 71635,1025 and Dave's is 70475,1165. They'll be glad to hear from you.

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The 800/800XL Caps Key

by Levin Soule

When running in BASIC, the operation of the CAPS (800XL) and CAPS/LOWER (800) keys are not the same. On the 800, the CAPS/LOWER key will always put you in lower case, and you must use SHIFT-CAPS to lock in upper case. On the 800XL the CAPS key is a toggle key. If you are in lower case, press CAPS and you are in upper case. If you are in upper case, press CAPS and you are in lower case. On the 800, a POKE 764,60 will always put the keyboard into lower case. A POKE 764,124 will always put it into upper case. On the 800XL POKE 764,124 and you are in upper case, but 60 will toggle between upper and lower case. POKE any other number in 764 and you redefine some of your keyboard keys. When you use GET or INPUT on a 400 or 800, you always get ? followed by the cursor. On an 800XL if you POKE 764 with a ? number, you may get normal operation or you will get a ? followed by some character or graphics symbol and then by the cursor.

[Reprinted from HAUG, April, 1985.]

GAMEVIEWS

by Roland Gebeler

Final Legacy

Final Legacy is the title of a recently released Atari game cartridge and hopefully not the verdict on Trameil's efforts to revive the company. I understand this game was developed some time ago, and I'm happy it didn't get ditched like so many other game projects are alleged to have demised. While many people are celebrating Atari's rebirth as a "computer" company, I, for one, am in mourning for the old game company. At least, if this is one of the last games to be introduced by Atari, I'm glad it is a good quality game.

Enough morbid opinions, on with the review (which I've already summarized in a sentence above). The "final" Legacy is a super space age, water based, battleship which you command in an attempt to turn back an invasion by your computer based enemy. This ship is equipped with sea-to-air missiles, sea-to-ground missiles, and torpedoes. Your job is to coordinate the use of these weapons to attack, and defend against, the enemy.

In the top half of the initial screen you are shown a selection of the above noted weapons and a condensed world map. In the bottom half you find a status panel noting your score, enemy missile sites remaining, damage to your ship, and fuel remaining. The weapons portion is topped off by a selection called "navigation". This choice will open the condensed map into a full screen on which you maneuver you battleship to select the targets you wish to attack. Your ship is represented on the map by a circle with a dot in the center. The dot is your ship and the circle represents the "range" you can attack, or be attacked, within. In other words, when you move your ship toward an enemy city on the map, you have to move to where the enemy city is within your circle in order for you to attack that city. Conversely, there are enemy ships attempting to track and attack you, and they can not harm you nor can you attack them until they are within your circle. Got it? Moving right along, your objective in this game is to wipe out the enemy missile sites before they wipe out your cities or your only ship.

Again, your three defense/attack selections and navigation are selected by joystick on that initial screen. I make a point of this because sometimes the difficulty of the game is in frantically trying to switch modes of defense/attack in time to save your boat or cities. After you have moved your ship to encompass an enemy missile site, you switch to the selection screen and select "Sea-to-land". The screen will switch to a battle scanner to reveal the enemy landscape in a window in the middle of the scanner. A narrow radar bar shows the enemies' mobile missile launchers in different colors to designate their distance from the center of your target scanner. You simply move your joystick to line up the enemy launcher and vaporize it. Simple? Yes, but I haven't told you the tough part yet ..... the second you entered this screen to attack these sights, the enemy launched an attack of many missiles against one or more of your cities! The status of those missiles is noted under the radar scanner in the number of seconds you have remaining before impact. So, you have to quickly attack the enemy, then switch back to the selection screen to select the "Sea-to-air" defense. Most of the time, you will be unable to wipe out all of enemy launchers before having to jump to the defense screen. The game scales the arrival time of the missiles to the relation of distance between the enemy city and your cities. Thus, if you are attacking a distant enemy city, you'll usually have time to wipe out the enemy. If you don't, you can return and only the remaining launchers will be waiting for you. Again, they will launch as soon as you return to attack them, but, the fewer the remaining launchers, the fewer missiles you will fight on the next screen.

On the next screen, to which you quickly switched, you are viewing a three quarters black screen, from the center of which are originating enemy incoming missiles. This screen would remind you of "Missile Command", but for a few major differences. The enemy missiles are, as noted above, coming out of various center portions of the screen, not the top, and are spiraling toward the outer edges. Your cities are not in sight in this screen as they would be in Missile Command, but, instead, you are attempting to intercept the missiles somewhere in route. You move your sight to the area in front or on top of an enemy missile and press the fire button to eliminate it from the sky. You continue through several rounds, (tied to the number of launchers you left behind), until the missiles stop coming and then switch back to the selection screen. During the switch from the attack to the defense, you notice on the map the streaming white missile trails enroute from the enemy sites to your cities (ala War Games).

To make this game more interesting, you are being pursued by warships of the enemy. As we mentioned above, they move into your circle and a sound warns you of their attack. The sound is that of an incoming round fired by the enemy ship. You have to switch to the selection screen and select "Torpedoes". Immediately on arrival at the ocean view screen you have to move right or left to avoid the shell (shown as an advancing plus sign). This screen shows the ocean, the bow of your ship, a radar "bar" noting the relative position of the enemy, and the sky with some of the most beautiful three dimensional clouds I've ever seen on a computer. The enemy ship is rarely in sight when you arrive, only his incoming shell. To attack the ship, you center it in your radar and move your joystick foward and a sleek ultra-modern warship appears gradually. The ship will continue to fire on you, but you can usually avoid the shots and they are not fired at rapid intervals. You are attempting to center this ship as it continues to move, and then fire your torpedoes. The ship will disintegrate and you will switch back to the selection screen.

These ships are constantly replaced by the computer, but you often can outrun them. It is rather annoying to be in the middle of an attack of the enemy bases, timer running down as missiles are moving towards your cities, and suddenly .... you hear a warship shell incoming! When you are hit, you lose a percentage of your ship. This

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SIX-GUN SHOOTOUT

or -- Is there a John Wayne in the House?!

by Dick Knisely

Well pardner, strap on yer holster and git ready to have it out Old West style. SSI's new game "Six-Gun Shootout" is a man-to-man combat game set in the American West of 1850-1890. In it there are ten scenarios taken from historical incidents (Gun Fight at OK Corral or the Shootout at Stinking Spring for example) and famous movies (such as Rio Bravo or the Magnificent Seven). Each scenario pits two groups of from 4 to 18 characters against one another. The scale of the game is such that each square on the screen represents about 10 feet and each turn represents about 10 seconds. Oh yes, to few of you this may sound suspiciously like the Avalon Hill board game called "Gunslinger" and well it should, this seems to be a much simplified, computerized version.

Over the last couple weeks I've played the game some two dozen plus times, playing every scenario at least twice (once for each side). To save time, and maybe some reading for some of you, here's the bottom line of the review -- the game is a good one: fun, fast, easily learned, and it plays well solitaire. However, it suffers from limitations in flexibility, scenario balance and makes only limited use of the superior Atari sound and graphics capabilities. Is it worth buying? Hmmmm.... for that you'll have to read on and decide for your self!

On booting the disk a menu screen pops up (no title screen as such is present) to choose the scenario and whether this will be a two player game, computer bad guys or computer good guys. You may then choose either preset or semi-random characteristics and, optionally, review those forces' characteristics. The map and men are displayed and the game begun. Game turns are broken into 5 segments, with a character's skill attributes determining what, if anything, he or she (yep, there are a couple female characters) may do in the segment. One of the minor criticisms I have of the game is that rules are actually much harder to read than the game is to play. While the rules go into great detail about movement and fire actions, in actual play the options are quite obvious and only a general idea of the concepts is really needed to begin play. Of course, if you care how the game accounts for the difficulty the slug from your medium, double action pistol will have in hitting the guy kneeling behind the horse trough 40 feet away, the tables are all here to calculate your exact probability of scoring a hit that passes through the trough and hits him in the leg doing serious (or minor) damage in the process. Mostly, you don't care, except for an occasional sharpshooting chance, you're just trying to hit the target at all. Bottom line -- scan the rules, go play and then go back and really read them if you wish. However, the good part of this is that there is a great deal of detail in the game that you don't have to worry about that still plays an important role in the outcome. For instance, there are 18 types of weapons in the game, from saber to six kinds of pistols to several rifles; each weapon has 10 characteristics; there are 25 kinds of terrain and there are 7 body areas that can take a hit. The complexity is there, but it won't get in the way. This is probably the best aspect of the game and what makes it fast and easy to play.

However, the same attention to detail is missing from other aspects of the game. The way to win a scenario is to score more points than your opponent but the only way to score points is killing his men. Although several of the scenarios depict situations (bank robberies and a jail break in particular) that should result in victory points for doing things other than wiping your opponent out, that's not what is allowed. One scenario (Dalton's Demise) has an oddity in that the Bad Guys *always* won (had the most points) -- but the game always ended with the Dalton gang wiped out to the last man. The inflexibility of the scenario set-up combined with this lack of imagination in the victory conditions is, to my mind, the game's most serious flaw.

One of the minor disappointments in the game is the simplisitic graphics and sound usage. The map is fairly small and appears to be done in Graphics Mode 2 characters. The graphics themselves are simple, but they work. Sound use is limited to a "bang" if you shoot and miss, and a "ping" if you score a hit. Running out of ammo gets you the word CLICK on the text screen, but no sound! All movement is via the keyboard -- too bad, a joystick would have made the game even easier to play and made two player games much easier. Unfortuately, all these items merely reflect the Apple origins of the game, sigh....

As noted above there are lots of scenarios to choose from, ten in all with a possible variation on each if you select the random characteristics choice. I quickly discovered, however, that the vast majority of the scenarios are unbalanced to the degree that one side is almost assured of winning. While that may reflect the "reality" of the situation, it sure doesn't make for much of a game. (Besides, it somehow is very disturbing to find that John Wayne can't win in Rio Brava!) The game would have been much improved with the inclusion of a way to build your own scenarios, or at least modify the existing ones by adding/subtracting characters from the default set up conditions. And there would appear to be an error either in the rules or the game with regard to the semi-random characteristics changes. The rules indicate that random values will be generated for move, accuracy and fire attributes while leaving armament, starting positions and names unchanged. However, I found that armaments were changed and that often had a significant effect since several scenarios became even more unbalanced if the deliberate unbalanced weapon assignments were changed.

As I noted, the game plays fast. One of the smaller scenarios might last 2 to 3 turns -- say 15 minutes of play, while one of the longer ones might require 6 to 8 turns and, perhaps, 30 to 40 minutes. So, it proved quite feasible to play several games in quick succession alternating between having the computer taking the Good Guys and the Bad Guys in order to see whether it was just

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BATTLE BYTES:

by M. Evan Brooks

Colonial Conquest

COLONIAL CONQUEST is SSI's newest offering for the computer simulation hobbyist. As mentioned in last month's article, if one expects a computer version of Pax Brittanica (Victory Games), one will be disappointed. Instead, Colonial Conquest is an amalgam of Risk and Diplomacy.

For an introductory game, the rules are rather complex at first glance. However, they soon become second nature after the first hour of play. Very simply, the goal of the program is to achieve world domination through the judicious use of military force and economic principles.

The world is divided into over 120 economic areas. The game provides for up to six (6) players: Germany, France, Great Britain, Russia, Japan and the United States. These player-nations may be handled by the computer, by real people, or they may be neutral.

Victory is achieved by point count (determined through military strength, economic value and prowess in battle). Victory conditions may be set to 500 points, 1000 points or unlimited. N.B.: A game of 500 points lasts about 3 hours; 1000 points goes on and on, and the unlimited game (total world domination) may well last for months. As is typical of SSI products, the game may be saved at several points during a turn.

The map of the world is somewhat primitive graphically. In fact, it is a little hard to differentiate certain areas, and the colors tend to run together. The art of computer graphics has in reality surpassed the map herein, but it is functional.

One has the choice to begin in 1880 (standard -- without colonies), 1880 (historical -- with colonies), or 1914 (outbreak of World War I). If the parameters are unchanged, the sole human player represents Germany. All nations are ranked at zero difficulty level (with a ranking of 0 [novice] - 9 [expert]); the only problem is that nowhere in the documentation is the historical ranking addressed. Obviously, Great Britain should be higher ranked than Russia (Disraeli compared with Count Stolypin?), but there is no way to tell what would best represent actual history. Then again, Risk does not represent the real world either.

A Game-Turn consists of the following Phases:

(1) Army Build: you may build armies in your home country up to the limit of your treasury

(2) Navy Build: you may build navies in your home country (assuming a port is available) up to the limit of your remaining treasury)

(3) Fortification: you may fortify (i.e. double the strength therein) of any area at $1 million per area

(4) Economic Aid: you may "loan" money to other players/nations

(5) Espionage: you may spend cash from the treasury in order to see the approximate strength and economi value of an area ($200,000 for colonies, $1 million for major nations).

(6) Subversion: you may spend money in order to subvert minor countries. Enough subversion and the country becomes yours ("Anschluss").

(7) Army Movement: you may move armies from point to adjacent point (as in Risk).

(8) Naval Movement: you may move navies from any port to any other port.

(9) Combat: any opposing armies in the same area will fight for domination.

While the army is the basic unit of conquest, it is the navy that propels the army to domination. Since supply is ignored in the game, a naval force may convoy its equivalent army strength anywhere in the world, e.g. Japan may establish the Japanese Congo or Japanese Chile. Never mind that such Mahanesque naval ambitions would have been totally beyond capability, the game permits this far-flung empire. Therefore, by definition, it is impossible to establish a sphere of influence and a forward defensive line. The navy may interpose itself anywhere and project the army into the homeland.

This reviewer's overall impression is muted. The computer opponents follow logic well; but such logic is in game terms, and ignores Realpolitik. This is one of the first computer games this reviewer has ever noted wherein multiple human player interaction is almost mandatory in order to achieve the necessary historic flavor. With human opponents, one can perform diplomacy and backstab to one's heart's content; also, spheres of influence may be carved out and made a causus belli. But the computer opponents are not diplomats; pure power is their goal, and nothing will swerve their aim (absent pulling the plug on the cord).

Tactical hints for the player nations follow:

(A) **GERMANY:** seek to dominate Belgium and the Balkans. At the same time (and with a higher priority), carve out an empire in Africa. Expand both army and navy; when easy conquests appear dim, begin the war with Russia (assuming that the rest of the world has not yet ganged up on you).

(B) **GREAT BRITAIN:** seek moderate expansion in Africa or South America (depending on where opposition is weakest), while maintaining the rest of your holdings. You act as an arbiter against any one nation building up too quickly; slow gradual expansion is your forte.

(C) **FRANCE:** seek to dominate Belgium as a buffer state (depending on Germany's moves), expand the empire in Africa, and be ready to move into the Chinese Empire when given the opportunity. The empire in Southwest Asia may also be expanded with little risk.

(D) **UNITED STATES:** A plague on all your houses! Do not get involved in the African landgrab. Central and South America are your spheres of influence. Make the Monroe Doctrine applicable, not the Carter Proviso ("It's our canal; we stole it fair and square!").

(E) **RUSSIA:** Poor Russia! So big and nowhere to go. Having never played the Russian, this reviewer cannot offer any hints. But in all games played, it was virtually a certainty that Russia came in dead last! Look to China and India; if the British leave an opening, take it. Otherwise, look towards China and seek a defensive posture; sooner or later, the Boche will be pouring over the Oder.

(F) **JAPAN:** An interesting nation. With a normal sphere of influence in the Pacific, your effective movement will be halved (since there will be no army adjacency movement in the island chains). But remember, in game terms, the navy can project army forces anywhere. While China is a rich prize, the native defense forces are formidable. Look to Africa!

In effect, there are more regions than nations competing. Therefore, if there is an unattended region, you should tend to it. Grab what you can as quickly as you can, without triggering war. Often, as your score mounts, the computer opponents will declare WAR. Also, it can be triggered by an accidental but simultaneous landgrab for the same parcel of real estate. Warfare is not an economic maximization factor; try to end the war as quickly as possible. The best way is by total subjugation of the opposing nation; the usual way is to grab some real estate, pose your defenses and hope for the best! One may also pay off the warring Powers; payments up to $8 million may or may not end the war, with the higher the payment the more likely an end to warfare. Personally, this reviewer believes that the $8 million could be better spent on other items (like an army to insure peace and quiet). The problem with paying off an enemy is that once peace is declared, the money is gone forever; money spent on armies and navies leaves the military forces in existence even after peace is concluded. The closer one is to winning, the greater the chance of being at war with the world.

Overall recommendation: if you have multiple players or like a game of semi-Risk, then Colonial Conquest may be the ticket. If on the other hand, you are looking for a game of power diplomacy set in the years of Bismark, this game may be too introductory.

SCUTTLEBUTT: Microprose, having recently released CRUSADE IN EUROPE (Western Front WWII) and DECISION IN THE DESERT (Rommel in North Africa), is currently working on CONFLICT IN VIETNAM. For a detailed review by this author of the former two games, see the Nov-Dec issue of Computer Gaming World. Also, SSI is working on a Civil War game (Antietam), and has now released BATTALION COMMANDER (from the same designer who brought us Combat Leader). By the end of the month (?), SSI plans to release Panzer-Grenadier, a Field of Fire on the Eastern Front. For the grognards, bad news -- SSI has placed War in the Pacific on indefinite hold.

Six-Gun (Continued from Page 19)

my rotten luck (poor play? perish the thought!) or an unbalanced scenario that was causing me to get wiped out so fast.

Earlier I mentioned the (very) similar board game "Gunslinger". How do the two games compare? For playing solitaire, general playability and fun, get Six-Gun Shootout. For realism, detail and the better simulation, get Gunslinger.

Overall, I liked playing the game, but I think I'd get tired of it after a few more plays (but then I did play it 25+ times already). If you're looking for a good, man-to-man combat SIMULATION, then I think SSI's game Computer Ambush would be the better choice. If, however, you like a fast and fun game where you can shoot 'em up, then this one will be well worth taking a look at.

GAMEVIEWS (Continued from Page 18)

number is indicated on the ship's bow and on the selection screen. When the number is reduced to zero or all of your cities are gone, you are through with this war.

There are six levels of rank to select to start this game. They increase the skills, accuracy, and speed of the enemy. Levels above the entry "Ensign" level, require you to return to your home cities to obtain fuel for your ship.

I think this is a very nice game. It keeps you very busy switching and balancing your attack and defense and has enough levels to keep even the most avid arcade fans busy for hours. The gameplay mechanics are not new, nor innovative, but are adequate to properly execute the play. The graphics are as fine as any I've seen on any computer game. I picked up my copy at L&Y Electronics, you may be able to find it at some other local computer stores. Prices range from $14.95 to $29.95. I will get most of my play value from this game but most likely not all of it. Considering what is available in new games, this one will do fine.

R E F — B A S E:

A Minature Database Manager Built with BASIC XL

by Christopher F. Chabris

BASIC XL, a cartridge-based language by Optimized Systems Software, is the newest and best version of BASIC available for Atari 8-bit computers. (OSS's new BASIC XE can't be used on the 400 and 800 machines.) It can be used with cassette as well as disk systems, and is almost totally upward-compatible with original Atari BASIC (unfortunately, it reserves the first 128 bytes of Page Six for its own use). I have been using BASIC XL for over a year, and find it very convenient for creating useful applications for three reasons:

1. Development time is reduced because approximately 50 new commands, functions, and ways of using old ones are provided. Player/Missile graphics commands eliminate the need for POKEs, memory maps, and machine-language subroutines. Programming aids such as TRACEing, RENUMbering and variable cross-referencing are only a command away, whereas they required separate utilities with Atari BASIC.

2. Programs require less memory for the same reason, combined with the power of OSS's "SuperCartridge." This clever device employs a technique know as "bank selection" to divide the 16K of ROM into four 4K blocks. But since only two of these blocks overlay RAM at any one time, only 8K of memory is occupied - the same amount as is used by Atari BASIC.[1]

3. Execution is faster because of the FAST command that converts all line numbers to memory addresses. This does away with the time-consuming search through memory for lines called by GOTO, GOSUB, FOR:NEXT, etc. OSS advertises a speed increase of two to four times over Atari BASIC. This is especially apparent in long programs when locating a line near the end of the listing.

Ref-Base is a miniature database manager that I developed from scratch in three days using BASIC XL. It is designed to organize lists of references for research projects, term papers, and the like. However, it can easily be adapted for other applications.

You might notice that BASIC XL allows and uses lowercase, and formats program LISTings with indentations. If you have a BASIC XL cartridge and disk drive, you can type in Ref-Base (I recommend invoking the automatic line-numbering facility with NUM 1000,10).

The remainder of this article explains how to use it, how it works, and how it illustrates special features of BASIC XL. If you don't yet own BASIC XL, reading further should give you an idea of the language's power.

Running Ref-Base

Upon RUNning Ref-Base, you are greeted with the Initialization screen. A directory of all the lists stored on the disk in drive 1 is displayed. Of course, the first time you use Ref-Base, you should see the "NO LISTS STORED" message. Answer the first prompt by pressing [START], and type a filename of eight upper-case characters (the program adds an extension to identify the file as a product of Ref-Base). The program creates the file on disk and continues on to the Main Menu.

This is where you can select various operations to perform on your list: adding and deleting references, sorting, printing reports, etc. Completion of these tasks either returns you to the menu automatically or gives you the choice of performing the task again. However, you may return here at any time simply by pressing [BREAK]. Each menu option is described in greater detail below.

ADD allows you to enter a new reference. References may have up to six pieces of information: AUTHOR (30 characters maximum), TITLE (60 characters), CITY of publication (30 characters), PUBLISHER (30 characters), YEAR of publication (4 digits), and any NOTES you have (60 characters). The maximum number of references allowed in a single file is 75.

DELETE prompts you for a reference number to purge from the file. Only use this option if you know the specific number of the reference you want to delete.

SORT organizes your file alphabetically in one of three orders: author-title-year, title-author-year, or year-author-title (earliest publication first). You should usually do this before using the PRINT option so your references are in order when you get hardcopy.

LOOK allows you to flip through the list, viewing each reference as it appears on the screen. At each reference, you have the choice of going on, marking it, or deleting it. If you mark it, the program remembers that it has some special significance, and you can later PRINT or LOOK through only those marked references.

FIND prompts you for a phrase (60 characters maximum) to search for throughout the entire file. The program marks each reference that contains the phrase so that you may access them later with LOOK or PRINT.

CLEAR wipes out all previous markers. This would normally be done before FIND so that only the references containing the given phrase are marked.

PRINT requires a printer to produce neatly formatted lists. I use an Epson MX-80 F/T III, and Ref-Base is written with its Graftrax Plus chip in mind. You are prompted for title and subtitle lines (60 characters maximum each), which are centered at the top of the first page in boldface type. The references are printed in com-

[1] For more information on the Super Cartridge, see Compute! "Insight: Atari,", p. 264, December 1983.

pressed type in order to fit more of them on each page, and a page number is printed at the bottom.[2]

QUIT must be used to exit Ref-Base with all changes saved to disk, or else work you do will not be permanent. The current set of markers is saved along with the references.

Program Structure

Ref-Base is organized into the following distinct modules, as identified in the listing's REM statements:

LINE NUMBERS	ROUTINE
1000-1280	Initialization
1290-1420	Main Menu
1430-1540	Execute ADD
1550-1590	DELETE
1600-1670	SORT
1680-1830	LOOK
1840-1900	FIND
1910-1940	CLEAR
1950-2210	PRINT
(2160)	Create left margin
(2180)	Paginate
2220-2260	QUIT
2270-2440	Miscellaneous functions
(2280)	Title display
(2310)	# References display
(2340)	Get YES/NO answer
(2380)	Extract a record's fields
(2400)	Construct a record
(2420)	Delete a record
2450-2520	Error Handler

A file (list) of records (references) is organized into three sections. The first is one byte that gives the total number of records, from 0 to 75. The second part is the largest; it consists of the individual records, in numerical, order up to the total number of records.

Each record is exactly 214 bytes long, and is organized in the following format:

POSITIONS	SIZE	NAME	CONTENTS
1- 30	30	AU$	Author's name
31- 90	60	TI$	Reference title
91-120	30	CI$	City of publication
121-150	30	PU$	Publisher
151-154	4	YE$	Year of publication
155-214	60	NO$	Notes & Comments

The third part is a block of 75 bytes identifying the marker status of each record. Status codes are:

32, or ASC(" "): Record is not currently marked.

89, or ASC("Y"): Record was marked when the QUIT option was last chosen.

During the program's initialization, after the user specifies an acceptable filename, the entire file, which, in fact, is your database, is read into memory. This obviously allows for easier manipulation than a system with constant disk access of data. However, it restricts the size of each file to the amount of available memory, a severe limitation for a general-purpose database management program. But the specific application being examined here, research references, should under most circumstances not require more than 75 records of information. If you're interested in writing programs to manipulate greater amounts of data, BASIC XL has two new commands that can make your task much easier:

```
RPUT #channel,expression[,expression ...]
RGET #channel,variable[,variable ...]
```

These store and retreive records that can contain both numeric and string records, and BASIC XL checks that the types being read match those that were written earlier. While RPUT and RGET are useful, I found it easier in Ref-Base to treat the file as one long string in memory, and a binary file on disk with no distinction between data types. Ambitious programmers may want to extend Ref-Base to allow files limited in size only by disk space!

The program uses a three-tiered system to deal with the file. The highest tier is represented by the variable FIL$, which holds the entire file (the variable FIL is equal to ADR(FIL$)). Record #1 would be positions 1-214 in FIL$ (FIL-FIL+213), #2 would be positios 215-428, etc. The next level is the variable REC$, which is used to hold the record currently being accessed. The last tier consists of six separate variables, each representing one of the fields (categories) in a record: AU$, TI$, CI$, PU$, YE$, and NO$.

Program Analysis

The program itself is written in a straightforward manner that should not be difficult to understand. We'll go through it line-by-line and discuss those features that are unique to BASIC XL.

The first really unusual statement is SET (line 1040). This is one of the most powerful available in BASIC XL because it controls a number of low-level functions, including tab stops, error messages (in English!), Player/Missile parameters, and the USR function.[3] In Ref-Base, SET 0,1 causes pressing [BREAK] to be a TRAPpable error, which is handled in lines 2450-2520. SET 2,32 changes the prompt character for INPUT statements from a question mark to a space (CHR$(32)).

(Continued on Page 26)

[2] If you have a different printer, consult your manual for the control codes required and make changes in line 2020 (cancel all special modes and engage boldface type) and 2040 (disengage boldface and engage compressed print).

[3] The most interesting is SET 9,1 which allows new program lines to be ENTERed without terminating execution. You could use this to create large programs in several modules, each to be loaded only when needed.

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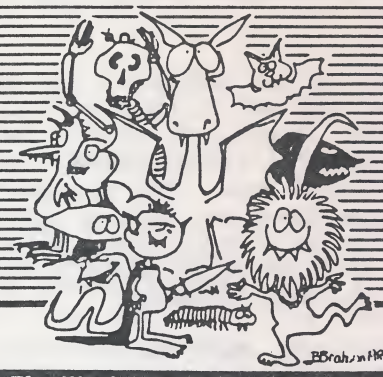

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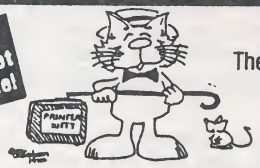

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REF-BASE (Continued from Page 23)

In line 1080, a common trick is used to initialize FIL$ and SF$: the first and last characters are set to spaces, and FIL$(2)=FIL$ causes the space to be replicated throughout the string very quickly (as opposed to a slow FOR:NEXT loop). Lines 1090-1110 seem unusual; why assign sets of ampersands, exclamation points, and pound signs to strings? These are used by the Print option (lines 1950-2210). We'll learn their secret when we discuss that portion of the program.

The machine language in the DATA statements of line 1130-1200 performs the SORT function.* Although it uses the extremely slow "bubble sort" algorithm, 75 records is the most required of it, and it can sort on any number of fields specified in major to minor order.

The OPEN command in line 1200 accesses the disk directory for only those filenames with the extension "LST" (it works with both single- and double-density disks). In line 1250, POKE 702,64 puts the keyboard in shift-lock mode before the user types in a filename. The message "Enter FILENAME:" is displayed, and the INPUT statement uses a [SPACE] prompt so that no question mark is displayed after the colon. POKE 82,17 sets the left margin so that, while INPUTting the filename, the user cannot backspace over the prompt.

BGET and BPUT commands are encountered in lines 1270-1280. These are very powerful because they allow reading and writing from and to a file, using absolutely any area of RAM as a buffer. Therefore, the entire file can very rapidly be loaded into FIL$ with a single statement, as in line 1270, or written to disk, as in line 1280.

The Main Menu module is unremarkable until line 1410. FIND is another powerful function; it is essentially a "string search" routine that returns the position of the first occurrence of a given string within another string. Here, it is combined with an ON-GOTO statement to process all menu selections in one line.

In the ADD module, POKE 702,0 puts the keyboard in lowercase mode. Again, the left margin is set so that the user cannot erase the prompts. Lines 1470-1500 demonstrate the capability of displaying a text message prompt in lieu of a single character along with an INPUT statement. After the record has been entered, lines 1520-1530 actually tack it onto the end of FIL$. Then, in line 1540, the user has the opportunity to ADD again without returning to the menu. The statement IF:ELSE:ENDIF, borrowed from structured languages like Pascal, is used to control the branching. If the condition is true, all code between IF and ELSE is executed (in this case, GOTO 1290). If it is false, that code is bypassed and anything between ELSE and ENDIF is executed instead. Use of IF:ELSE:ENDIF often allows program control structures that would require multiple lines in Atari BASIC to occupy a single line in BASIC XL.

---

* I did not write the routine, however. It was created by Adrian Dery and first appeared in the fourth issue of Antic Magazine, October/November 1982.

The DELETE and SORT modules are very short, simply accepting user input and calling subroutines. LOOK is more complicated. It gets each record in order, skipping if the user wishes to view only marked records and the record is not one of those. After displaying the data, the program offers three choices (lines 1780-1820): continuing on, reversing the marker status of the record, or deleting it. These options are controlled by a number of IF:THEN and IF:ELSE:ENDIF statements.

FIND, predictably, repeatedly uses the FIND function (in line 1890) to discover each occurence of a user-supplied phrase. Line 1900 marks the record and proceeds on to the next. It should be noted that this part of the program would be both longer and slower were it coded in Atari BASIC with no machine-language subroutines.

CLEAR simply uses the string-clearing trick from lines 1080 and 1460 to wipe out all markers. PRINT is the most complicated module. After getting title and subtitle lines for the report, centering them, and printing the column headings at the top of page 1, it goes into a loop similar to that of the LOOK module.

Lines 2110-2130 introduce the PRINT USING capability, another advanced, Microsoft-like command. Each PRINT USING statement has an associated format string containing format characters. Those used in Ref-Base, F1$, F2$, and F3$, were mysteriously defined earlier in lines 1090-1110. Basically, PRINT USING outputs any possible kind of data in any possible format, with one annoying exception: a format field can be no more than 59 characters long. In Ref-Base, this limitation "chops off" the last character of TI$ and ND$ in printed reports.

The following format characters are allowed:

CHARACTER (TYPE)	FUNCTION
# (numeric)	Fill with leading blanks
& (numeric)	Fill with leading zeroes
$ (numeric)	Fill with leading asterisks
. (numeric)	Print a decimal point
, (numeric)	Print a comma
+ (numeric)	Display sign of number
- (numeric)	Display sign only if negative
% (string)	Right justify
! (string)	Left justify
/ (either)	Causes next character appearing to be printed normally

PRINT USING is much more flexible than I can explain here. It may seem especially powerful to those of you who have struggled to make Atari BASIC produce neatly formatted output.

The QUIT module again uses the BPUT command to save the file to disk before ENDing the program. Most of the miscellaneous subroutines are unremarkable, except for two lines. In 2330, the operator ! is used to execute a binary AND of two numbers (like the 6502 machine language instruction) in order to make part of a string appear in inverse video. In 2430, where a record is actually purged from memory, MOVE is used for the first time. This versa

(Continued on Page 30)

```
1000 Rem *** REF-BASE, VERSION 3.23:
1010 Rem ***  A RESEARCH REFERENCE
1020 Rem ***  MANAGEMENT SYSTEM.
1030 Rem *** BY CHRIS CHABRIS, 1984-5
1040 Fast :Trap 2450:Graphics 0:Poke 6
5,0:Poke 752,1:Set 0,1:Set 2,32
1050 Mc=96:Gosub 2280:? "  MODE: Initi
alization                    "
1060 Dim Q$(2),Buf$(8),Fn$(17),Au$(30)
,Ti$(60),Ci$(30),Pu$(30),Ye$(4),No$(60
),Rec$(214),F1$(100),F2$(100)
1070 Dim F3$(100),Page$(12),T$(60),5$(
60),Ph$(60),Fil$(16051),5f$(76),Sort$(
182),Er$(40)
1080 Fil$(1)=" ":Fil$(16051)=" ":Fil$(
2)=Fil$:Fil=Adr(Fil$):5f$(1)=" ":5f$(7
6)=" ":5f$(2)=5f$:Sort=Adr(Sort$)
1090 F1$="&&   !!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!     !!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!! "
1100 F2$="     !!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!     !!!!!!!!!!!!!!!!!!!!!!!!!
!!!!                          XXXX"
1110 F3$="
          !!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!! "
1120 Restore 1130:  For L=Sort To Sort
+181:Read B:Poke L,B:Next L
1130 Data 216,104,56,233,3,133,217,104
,133,204,104,133,203,104,133,215,104,1
33,214,104,133,210,104,133,209,162,0
1140 Data 104,104,157,0,1,232,228,217,
208,246,56,165,209,233,2,133,209,165,2
10,233,0,133,210,48,108,165,209,133
1150 Data 211,165,210,133,212,165,204,
133,206,133,208,165,203,133,205,24,101
,214,133,207,165,208,101,215,133,208
1160 Data 160,0,185,0,1,190,2,1,134,21
8,190,1,1,200,200,200,132,216,168,136,
177,205,209,207,240,12,165,218,208,4
1170 Data 144,16,176,46,144,44,176,10,
200,202,208,234,164,216,196,217,208,21
0,198,211,169,255,197,211,208,6,166
1180 Data 212,240,11,198,212,165,208,1
33,206,165,207,24,144,172,165,213,240,
4,134,213,208,148,96,134,213,160,0
1190 Data 177,205,170,177,207,145,205,
138,145,207,200,196,214,208,241,240,20
3
1200 Open #1,6,0,"D1:*.RFB":B=0:? :? "
 The following list(s) are on file:":P
oke 82,2:Poke 83,37:?
1210 Input #1,Fn$:If Fn$(5,16)<>"FREE
SECTORS" Then ? " ";Fn$(1,10);" ";:B=B
+1:Goto 1210
1220 Close #1:Poke 82,0:Poke 83,39:If
B=0 Then ? "  NO LISTS STORED."
1230 ? :? :? :? " Press START  to crea
te a new list":? "        SELECT to loa
d an existing list"
1240 Q=Peek(53279):If Q<>5 And Q<>6 Th
en 1240
1250 Fn$="                    ":Poke 752,
0:Poke 702,64:? :? " Enter FILENAME:";
:Poke 82,17:Input Buf$:Poke 752,1:?
1260 Fn$(1,3)="D1:":Fn$(4,3+Len(Buf$))
=Buf$:Fn$(4+Len(Buf$))=".RFB"
1270 If Q=5 Then Open #1,4,0,Fn$:Get #
1,Nr:If Nr Then Bget #1,Fil,214*Nr:Bge
t #1,Adr(5f$),75
1280 If Q=6 Then Open #1,8,0,Fn$:Nr=0:
Put #1,Nr:Bput #1,Adr(5f$),75
1290 Rem - MAIN MENU DISPLAY:
1300 Close #1:Poke 82,0:Poke 83,39:Mc=
64:Gosub 2280:? "  MODE: Main Menu
(   references)  ":Gosub 2310
1310 Poke 752,1:Poke 764,255:Poke 702,
64:? " Choose one of the following opt
ions:":?
1320 ? "   ADD a new reference"
1330 ? "   DELETE an existing referenc
e"
1340 ? "   SORT the list of references
"
1350 ? "   LOOK through references"
1360 ? "   FIND specific references"
1370 ? "   CLEAR reference markers"
1380 ? "   PRINT lists of references"
1390 ? "   QUIT and save the file"
1400 Open #1,4,0,"K:":Get #1,Ch:Close
#1
1410 On Find("ADSLFCPQ",Chr$(Ch),0) Go
to 1430,1550,1600,1680,1840,1910,1950,
2220
1420 Goto 1400
1430 Rem - ADD A REFERENCE:
1440 If Nr=75 Then Position 1,22:? Chr
$(253);" Too many references to ADD!";
:Goto 1400
1450 Mc=20:Gosub 2280:? "  MODE: Add
(   references)  ":Gosub 231
0:? " Reference # ";Nr+1;":"
1460 Rec$(1)=" ":Rec$(214)=" ":Rec$(2)
=Rec$:Poke 702,0:Poke 752,0:Poke 82,9:
Poke 83,38
1470 Position 1,8:Input "AUTHOR:  ((",
Au$:If Len(Au$)=0 Then 1290
1480 Position 1,9:Input " TITLE:  ((",
Ti$:Position 1,11:Input "  CITY:  ((",
Ci$
1490 Position 1,12:Input "   PUB:  ((",
Pu$:Position 1,13:Input "  YEAR:  ((",
Ye$
1500 Position 1,14:Input " NOTES:  ((",
No$:Poke 82,0:Poke 83,39:Poke 752,1
1510 ? :? :M$=" Is this reference OK (
Y/N)?":Gosub 2340:If No Then 1290
1520 Nr=Nr+1:Gosub 2400:  For L=1 To L
en(Rec$):If Rec$(L,L)=Chr$(0) Then Rec
$(L,L)=" "
1530   Next L:Fil$(214*Nr-213,214*Nr)=
Rec$
1540 M$=" Add another (Y/N)?":Gosub 23
40:  If No:Goto 1290:Else :Goto 1430:E
ndif
1550 Rem - DELETE A REFERENCE:
1560 Mc=52:Gosub 2280:? "  MODE: Delet
e          (   references)  ":Gosub 231
0:Poke 752,0
1570 Input " Reference # to delete: ",
Recnum:If Recnum>Nr Then 1290
1580 Poke 752,1:M$=" Are you sure (Y/N
)?":Gosub 2340:If Yes Then Gosub 2420
1590 Goto 1290
1600 Rem - SORT LIST OF REFERENCES:
1610 Mc=194:Gosub 2280:? "  MODE: Sort
(   references)  ":Gosub 23
10
1620 ? " Sort on AUTHOR, TITLE, or YEA
R?":?
1630 Open #1,4,0,"K:":Get #1,Ch:Close
#1:If Ch<>65 And Ch<>84 And Ch<>89 The
n 1630
1640 ? " SORTING ..."
1650 If Ch=65 Then Q=Usr(Sort,Fil,214,
Nr,1,30,0,31,60,0,151,4,0):Goto 1290
1660 If Ch=84 Then Q=Usr(Sort,Fil,214,
Nr,31,60,0,1,30,0,151,4,0):Goto 1290
1670 Q=Usr(Sort,Fil,214,Nr,151,4,0,1,3
0,0,31,60,0):Goto 1290
1680 Rem - LOOK THROUGH LIST:
1690 Df=100:Mc=242:Gosub 2280:? "  MOD
E: Look            (   references)  ":G
osub 2310
1700 ? " View All or Marked references
?"
1710 Open #1,4,0,"K:":Get #1,Ch:Close
#1:If Ch<>65 And Ch<>77 Then 1710
1720   For Recnum=1 To Nr:Position 0,5
:  For L=1 To 20:? Chr$(156);:Next L:?
 :Rec$=Fil$(214*Recnum-213)
```

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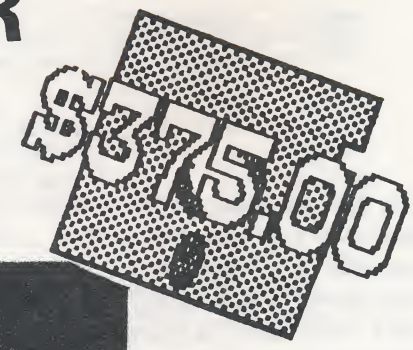

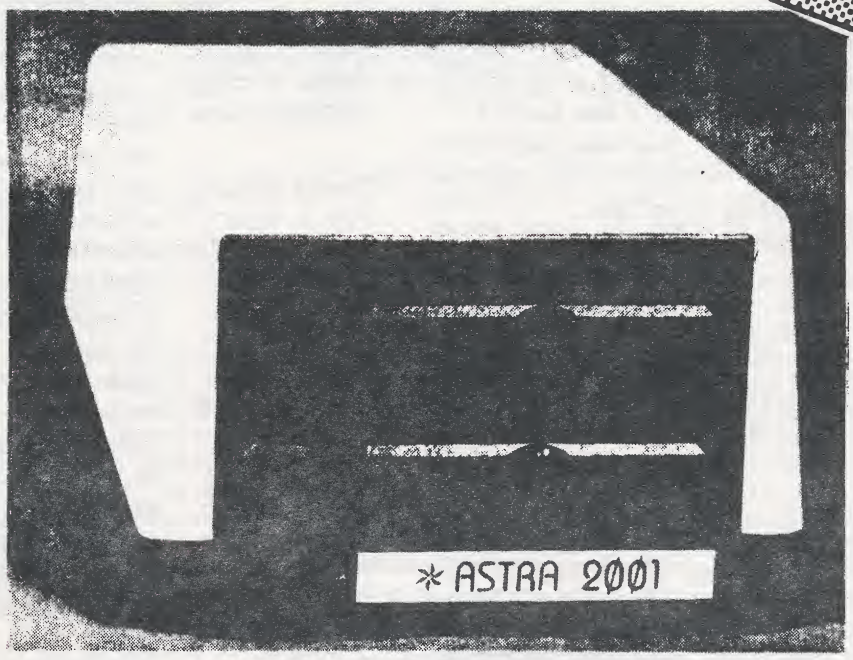

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```
1730   If Recnum>Df Then Pop :Goto 129
0
1740   Sf$(76)=" ":If Ch=77 And Sf$(Re
cnum,Recnum)<>"Y" Then 1830
1750   Gosub 2380:? " Reference # ";Re
cnum;":":Poke 82,9:Poke 83,38
1760   Position 1,8:? "AUTHOR: ";Au$:P
osition 1,9:? " TITLE: ";Ti$:Position
1,11:? "  CITY: ";Ci$
1770   Position 1,12:? "   PUB: ";Pu$:
Position 1,13:? "  YEAR: ";Ye$:Positio
n 1,14:? " NOTES: ";No$
1780   Poke 82,0:Poke 83,39:? :? " Pre
ss START  to continue":? "        SELEC
T to (un)mark and continue"
1790   ? "        OPTION to delete and
continue"
1800   Q=Peek(53279):If Q=6 Then 1830
1810   If Q=5 Then   If Sf$(Recnum,Rec
num)=" ":Sf$(Recnum)="Y":Else :Sf$(Rec
num)=" ":Endif :Goto 1830
1820     If Q=3:Gosub 2420:Df=Nr:Gosub
 2310:Recnum=Recnum-1:Goto 1830:Else :
Goto 1800:Endif
1830   Next Recnum:Goto 1290
1840 Rem - FIND SPECIFIC REFERENCES:
1850 Mc=178:Gosub 2280:? "  MODE: Find
          (  references)  ":Gosub 23
10:? " What do you want to find?"
1860 Poke 702,0:Poke 82,9:Poke 83,38:P
oke 752,0:Position 1,8:Input "PHRASE:
 ((",Ph$
1870 If Len(Ph$)=0 Then 1290
1880 Poke 82,0:Poke 83,39:Poke 752,1:?
 :? " SEARCHING ...":Q=0
1890 Q=Find(Fil$,Ph$,Q+1):If Q=0 Then
1290
1900 Recnum=Int((Q-1)/214)+1:Sf$(Recnu
m,Recnum)="Y":Goto 1890
1910 Rem - CLEAR REFERENCE MARKERS:
1920 Mc=84:Gosub 2280:? "  MODE: Clear
Marks    (  references)  ":Gosub 231
0:M$=" Are you sure (Y/N)?"
1930 Gosub 2340:If No Then 1290
1940 Sf$(1)=" ":Sf$(76)=" ":Sf$(2)=Sf$
:Goto 1290
1950 Rem - PRINT LIST:
1960 Mc=146:Gosub 2280:? "  MODE: Prin
t          (  references)  ":Gosub 23
10:Sf$(76)=" "
1970 ? " Print All or Marked reference
s?":? :Poke 702,64
1980 Open #1,4,0,"K:":Get #1,Ch:Close
#1:If Ch<>65 And Ch<>77 Then 1980
1990 Poke 752,0:Poke 82,9:Poke 83,38:P
osition 1,9:Input " TITLE:  ((",T$:Pos
ition 1,11:Input "SUBTTL:  ((",S$
2000 Poke 752,1:Poke 82,0:Poke 83,39:?
 :? :? " Adjust paper and press START
to begin."
2010 If Peek(53279)<>6 Then 2010
2020 Pn=1:Open #1,8,0,"P:":? #1;Chr$(2
7);Chr$(64);Chr$(27);Chr$(69):  For L=
1 To 5:? #1:Next L
2030   For L=1 To Int((80-Len(T$))/2)+
1:? #1;" ";:Next L:? #1;T$
2040   For L=1 To Int((80-Len(S$))/2)+
1:? #1;" ";:Next L:? #1;S$:? #1;Chr$(2
7);Chr$(70);Chr$(27);Chr$(15)
2050 ? #1:Gosub 2160:? #1;"R#   AUTHOR
                                TITLE":Go
sub 2160
2060 ? #1;"     CITY
          PUBLISHER
                                  YEAR"
2070 Gosub 2160:? #1;"
                          NOTES":Gosub 2
160:  For L=1 To 100:? #1;"=";:Next L
2080 ? #1:Line=15:? :? " PRINTING ..."
2090   For Recnum=1 To Nr:If Ch=77 And
 Sf$(Recnum,Recnum)<>"Y" Then 2140
2100   Rec$=Fil$(214*Recnum-213):Gosub
 2380
2110   Gosub 2160:? #1; Using F1$,Recn
um,Au$,Ti$
2120   Gosub 2160:? #1; Using F2$,Ci$,
Pu$,Ye$
2130   Gosub 2160:? #1; Using F3$,No$:
? #1:Line=Line+4:If Line>60 Then Gosub
 2180
2140   Next Recnum:If Line<11 Then Clo
se #1:Goto 1290
2150   For L=1 To (65-Line):? #1:Next
L:Gosub 2200:Close #1:Goto 1290
2160 Rem CREATE LEFT MARGIN
2170 ? #1;"                    ";:Retur
n
2180 Rem FEED TO NEXT SHEET
2190 Line=7:? #1:? #1
2200 Page$="-- page ",Str$(Pn)," --":
 For L=1 To 64:? #1;" ";:Next L:? #1;P
age$:Pn=Pn+1:? #1
2210 ? #1:? #1:? #1:? #1:? #1:? #1:Ret
urn
2220 Rem - QUIT AND SAVE FILE:
2230 Gosub 2280:? "  MODE: Quit
     (  references)  ":Gosub 2310:M$="
 Are you sure (Y/N)?"
2240 Gosub 2340:If No Then 1290
2250 ? :? " SAVING FILE ...":Open #1,8
,0,Fn$:Put #1,Nr:Bput #1,Fil,214*Nr:Bp
ut #1,Adr(Sf$),75:Close #1
2260 Graphics 0:Poke 82,2:End
2270 Rem - MISCELLANEOUS SUBROUTINES:
2280 Rem CLEAR SCREEN, DISPLAY TITLE
2290 Poke 752,1:Poke 82,0:Poke 83,39:?
 Chr$(125):? " *** REF-BASE by Chris C
habris 1984 *** "
2300 Poke 712,Mc:Return
2310 Rem DISPLAY NUMER OF REFERENCES
2320 Q$=Str$(Nr):If Nr<10 Then Q$="0",
Str$(Nr)
2330   For L=Adr(Q$) To Adr(Q$)+1:Poke
 L,Peek(L)!128:Next L:Position 24,3:?
Q$;:Position 0,6:Return
2340 Rem RETURN YES/NO ANSWER
2350 ? M$:Yes=0:No=0
2360 Open #1,4,0,"K:":Get #1,Ch:Close
#1:If Ch=78 Or Ch=110 Then No=1:Return
2370   If Ch=89 Or Ch=121:Yes=1:Return
 :Else :Goto 2360:Endif
2380 Rem EXTRACT A RECORD'S FIELDS
2390 Au$=Rec$(1,30):Ti$=Rec$(31,90):Ci
$=Rec$(91,120):Pu$=Rec$(121,150):Ye$=R
ec$(151,154):No$=Rec$(155):Return
2400 Rem CONSTRUCT A RECORD
2410 Rec$(1)=Au$:Rec$(31)=Ti$:Rec$(91)
=Ci$:Rec$(121)=Pu$:Rec$(151)=Ye$:Rec$(
155)=No$:Return
2420 Rem DELETE A RECORD
2430 Move Fil+Recnum*214,Fil+(Recnum-1
)*214,(76-Recnum)*214:Move Adr(Sf$)+Re
cnum,Adr(Sf$)+Recnum-1,76-Recnum
2440 Nr=Nr-1:Return
2450 Rem ERROR HANDLER
2460 E0=Err(0):E1=Err(1):Trap 2450:Clo
se #1:If E0=1 Then ? Chr$(253);:Goto 1
290
2470 Er$="  ERROR #",Str$(E0)," at lin
e ",Str$(E1),"; Press [ESC]   ":Er$(40
)=" "
2480   For L=Adr(Er$) To Adr(Er$)+39:P
oke L,Peek(L)!128:Next L
2490 Poke 82,0:Poke 83,39:Poke 752,1:P
osition 0,4:? Er$;
2500 If Peek(764)<>28 Then 2500
2510 If E1<1300 Then Run
2520 Goto 1290
```

Ref-Base (Continued From Page 26)

tile command copies any number of bytes from portion of memory to any portion of RAM, although the programmer must be careful not to let the addresses get out of hand. Here, it copies all records after the one to be deleted 214 bytes "backwards" in memory so that they overwrite the deleted one. The same is done to the string of markers. Without a MOVE command (or similar machine-language subroutine), deletion could involve a slow FOR:NEXT loop or a complicated system of flags and pointers. With MOVE, it is accomplished in one quick and dirty line.

The error handler introduces the ERR function, which returns the error number and line at which the error occurred. This function is really just a convenience, for it can be easily duplicated in Atari BASIC with PEEK(195) and PEEK(186)+256*PEEK(187).

In closing, I must remind those of you who are still skeptical that Ref-Base only scratches the surface in its use of BASIC XL's special features. A partial list of those not used:

- Player/Missile Graphics commands and functions, and additional controller functions

- String arrays, Microsoft string handling (LEFT$, MID$, and RIGHT$), simple concatenation, and automatic string DIMensioning

- WHILE:ENDWHILE, another program control structure borrowed from Pascal

- Full support of hexadecimal numbers, as well as DPEEK and DPOKE to operate with 16-bit numbers

If this taste of BASIC XL has just whetted your appetite for powerful BASIC programming, look into OSS's related products: The BASIC XL Toolkit and BASIC XE, a language designed to take full advantage of the extra 64K RAM in the 130XE machine. With these development tools, you can write programs that no one would have dreamed of using BASIC for a few years ago!

A PARODY OF "A FEW MINUTES WITH ANDY ROONEY"

J'ever notice all the fuss everyone is making over computers these days? It seems you can't go anywhere without hearing "home computer this" and "personal computer that". Why is that? What's so great about computers, anyway?

J'ever notice everyone says, "you need a computer" or "9 in 10 homes will soon have a computer"? Why do I need a computer? And why will 9 in 10 homes have one? Is the government going to pass a law or something? Right now, the only one on my block that has one is 17 years old, weighs 98 pounds, wears glasses and has acne. He is a "NERD". J'ever notice how popular NERDS have become? Why is that? Maybe because they have computers, which are popular too. If I buy a computer, will I become popular? Or will I become a NERD?

J'ever notice there are "home" computers and then there are "personal" computers? Why is that? Are they the same or are they different? Can you use a home computer outside your home? Do you have to keep a personal computer to yourself, or can you share it with your friends? There are also LAP-TOP computers. Are they for people who can't afford a desk?

J'ever notice people who use computers are called "HACKERS"? Just what is a hacker, anyway? To me, it sounds like someone you wouldn't want to meet in a dark alleyway. When I think of a HACKER, I think of Jason in "Friday the 13th". He hacked people with a large knife and lived in the woods. Did he have a computer? Was it a "FOREST" computer?

J'ever notice that if a computer is easy to understand it is called "USER-FRIENDLY"? Why is that? Does that mean that easy to understand means the same as friendly? If Jason comes up to me and says, "I'm going to hack you up with my knife", I can sure UNDERSTAND him, but I don't think that he is FRIENDLY. Why is that?

My friend, the Nerd, once told me, "My computer speaks BASIC, FORTRAN, and LISP." I don't know about Basic and Fortran, but if his computer has a LISP, why doesn't he take it to a speech therapist? Come to think of it, the Nerd has a lisp, too!

J'ever notice all those computer commercials on TV? Alan Alda showed how easy to understand an ATARI computer is. Atari must be "friendly". William Shatner presses a button on a Commodore computer and he disintegrates! Commodore doesn't sound very friendly to me. Maybe Jason has one. Charlie Chaplin does a commercial for IBM. Why is that? I mean, he was born in the 1800's. They didn't even have computers then.

And finally, j'ever notice how stupid they name computers nowadays? They used to call them ENIAC or UNIVAC. I could relate to that. But now they are called things like Apples or Oranges or Apricots. When I eat apricots, I get the runs. If I use an Apricot computer, will I get the runs? Then you've got the TI 99/4A. What the heck is a 99/4A anyway. Isn't that Dolly Parton's size? The Nerd has a TRS-80, but he calls it a TRASH-80. If is was TRASH, why did he buy it in the first place? Do only nerds buy TRASH-80's.

Well, that about all for now. J'ever notice how many times I say, "J'ever notice"? Why is that? J'ever notice I always say "Why is that"? Why is that?

[Reprinted from the May, 1985 edition of "HACK" - published by the Atari Anonymous of Rhode Island User Group.]

ARMUDIC Update

By Ted Bell

I am, finally, happy to report that almost all the "Bugs" in the system are fixed. We have put so many modifications into the program that we doubt that Matt Singer, the author of Forem XL, would recognize it. In any event, HAPPINESS is having a reliable BBS.

Members of NOVATARI and NCAUG user groups enjoy the highest level which is level 6. If you are a member of either of these groups and aren't at level 6, leave us a message using the "L" command. Check your level by using the "P" Profile command. The "P" command also allows you to change several other things including your password. Passwords must be held in strict confidentiality. If someone in your particular social circle has spotted your password, please change it. If you are a member of one of the other five WAACE clubs, remember you can become an "associate" member of either NCAUG or NOVATARI for $5 and gain complete access to ARMUDIC.

As a reminder, holding down the [CONTROL] key and then pressing "N" is a great time saver. This says to the computer, "Stop what you are doing and go to the next item." As an example, if you are tired of seeing the ATASCII ARMUDIC Banner when you first sign on, or the Bulletins, simply hit [CONTROL]+N.

The [RETURN] key generally means "Yes" and the [SPACEBAR] generally means "No". When reading messages, instead of hitting the "N" key for next, simply hit the return key -- both work the same.

Don't be afraid to chain your commands. Suppose you are in the "GO" command and wish to read all the newest messages in the WANT ADS/SALES base which is base #5. You would give the command "Z" to change message base; the response "5" to go the WANT ADS/SALES base; and, finally, the response "-" to indicate a full reverse read. You can abbreviate all of this by simply entering "Z 5 -". You must have a space in between the Z and the 5 and the -. A colon (:) or semicolon (;) will also work instead of a space, but why put them in when just a space will do!

There are close to 300 passwords on the system now. Ever get curious who they all are, or how to spell their names? Well there is a way to find out. Prepare to write a message to someone by hitting the "E" key while in the "Go" command or by hitting the "S" key while in the "SELECT" command. The program will first of all ask you for a subject. Fill that in. Then the program will ask you, "TO....." Hit the "?" key and follow the instructions. This command is really used to get the correct spelling of the person to whom you are leaving a message. The name must be spelled correctly or the receiver of the message will never get it. As an example, a message was recently left to me addressed as "Sysop(Ted Bell)". Wrong! There is a SYSOP and a Ted Bell but no Sysop(Ted Bell) and while I am at it, even though there are 3 Sysops on our systems, don't leave a message to "Sysops" - make it "Sysop". We all get on the BBS as SYSOP and the search routines look for messages as SYSOP only.

ATARIFEST '85
Coming in November

by Terry White

Coming November 9 at Fairfax High School is an event that, we hope, will rekindle that Atari flame in your heart. Plan on using your computer system like you never dreamed possible. But when this happens, watch out, because there will be no stopping you.

The first Atari Computer Fair in the Washington metropolitan area will be held on Saturday, November 9 from 10 am to 4 pm at the Fairfax High School in Fairfax, Virginia. It will be called Atarifest '85 and will be for the Atari computers, both 8-bit and 16/32-bit, exclusively. The Northern Virginia Atari Users Group (NOVATARI) and the Fairfax County Adult Education Program are co-sponsoring this event in the hope that more people, both individuals and families, will understand those machines at home or in the office. This will be done by allowing Atari-related software and hardware vendors to demonstrate their products. Seminars will be given on topics of general interest to the Atari community and Users Groups in the Washington metropolitan area will be there to answer questions and, of course, encourage membership in their groups.

A number of vendors of Atari-related products will be exhibiting their products at this show. Also, area User Groups will have available a vide selection of disks with public domain programs for the Atari.

All of the Atari home computers including the 400, 800, 800XL, 130XE, and the new 520ST, will be represented with hardware and software demonstrations and seminars. You will be able to see firsthand the latest in new Atari software, both for the 130XE and the new 520ST. We also hope to have a demonstration, or at least a video tape, of the incredible encyclopedia on a disk. And if that's not enough, we'll also be giving away door prizes every hour.

So, right now, mark this date on your calendar:

NOVEMBER 9

FAIRFAX HIGH SCHOOL

FAIRFAX, VA

10 am - 4 pm.

NOTE: Since the ATARIFEST comes just one day before the regular NOVATARI meeting scheduled for November 10 (the day of the Washington/Dallas game), the ATARIFEST will take the place of the November NOVATARI meeting.

P.S. -- If you would like to volunteer to help before and/or during the fair, contact me as soon as possible. We are looking for people to help orgainize, setup and run this fair. If you have something you want to exhibit and/or sell, call me. If your user group has not yet been contacted, call me. I can be reached at (703) 560-7726.

Computer David Stuns Goliaths

ATARI Victor at Word Processing Rally

[The following is a press release supplied by Batteries Included. They, of course, used PaperClip in the contest, but I think the results would not have been too far different with some other word processing programs available for the Atari. In any case, I thought our readers would enjoy seeing how well your lowly Atari did against the "professional" word processors!" JHJ

Batteries Included, a "David" amongst the giants of the computer industry, took on the Goliaths at the Great Canadian Word Processing Rally (May 5, 1985 at McMaster University) - including IBM, Apple, Xerox, Philips, Sperry, Olivetti, Sanyo, Burroughs, NCR and others. Batteries Included lost but they also won.

In the competition for total points, Batteries Included finished midway down the list. But in the competition judged on points per cost of the Word processing system, PaperClip from Batteries Included won first and second place - beating its closest competitor by more than twice their score.

Batteries Included entered two computer systems. The winner, judged on total points per $1,000 cost, was made up of the following: PaperClip, Word processing program by Batteries Included; Atari 800XL computer; Atari 1050 disc drive; Commodore 1702 monitor; Epson MX80 printer; and MPP Microprint printer interface.

The second place system: PaperClip, Commodore 64 computer, Commodore 1702 monitor, Epson RX80 printer, and Batteries Included printer interface. The total cost of the Atari system is $1,176 and the Commodore system, $1,549. The competition ranged in price from $2,000 to $20,000.

"I didn't know we were that good. We didn't expect to win, although we knew PaperClip could hold its own against other Word processing programs, but we wanted to see how we stacked up against dedicated business systems," says Marty Herzog, Director of Creative and Marketing Services for Batteries Included. "It was a victory for the underdogs and all those who cannot afford an expensive computer. It means we can take pride in what we have."

When Herzog first contacted the Rally organizers, they said, "Are you sure you want to compete?" But the big names entered did not scare him off.

"At the competition, Atari and Commodore got a skeptical, ho-hum response, at first," he says. "They doubted us in the beginning but they came away impressed."

Herzog reports he was almost embarassed when he walked into the McMaster gym with Batteries Included keyboard jockeys Wayne Bryan and Howard Campbell, carrying all their equipment under their arms.

"There were moving vans and professional movers uncrating long lines of expensive computers and dedicated Word processing systems," he says. "And there was Batteries Included with PaperClip and our Commodore and Atari systems, which fit into my car's trunk."

The bleachers were filled with spectators and the contest was run like an athletic event. Contestants and machines were introduced to the spectators and the head judge started things off by waving a checkered flag and saying, "Ladies and gentlemen, boot your systems!"

Judges with stop watches monitored each system and awarded points in numerous categories for items such as editing features, design, professional accessories, formatting and printing. They held up numbers at the end of each event like scorers at a gymnastics or skating competition.

"I'd like to see the Word processing rally become a major annual event," Herzog says. "It's an easy way to find out where everybody stands. Batteries Included is already planning refinements and improvements based on the competition results. We may not have defeated Goliath, this year, but we sure stunned him."

The following are the original unaudited results from The Great Canadian Word Processing Rally, sponsored by the Canadian Science Writers' Association, in the category of total points per cost of the Word processing system.

#	Manufacturer	Model	Price	Total Points	Points/ $1000
1	Batteries Inc	PaperClip,Atari	$1,176	58	49.3
2	Batteries Inc	PaperClip,C64	1,549	60	38.7
3	Nelma	Nelmawriter	1,995	47	23.6
4	Computron	Kaypro 2,Wordstar	2,865	66	23.0
5	Sanyo	MBC 555-2	2,754	47	17.1
6	Gutenberg	Apple II, Gtbg.Sr.	4,000	64	16.0
7	Olivetti	Typewriter ETV250	3,995	55	13.8
8	Apple	Macintosh,Image	6,089	82	13.5
9	Sperry	Transp,Samna	5,177	69	13.3
10	Satellite Sft	Word Perfect,IBM	6,395	85	13.3
11	IBM	PCjr,WrtgAsst	3,565	46	12.9
12	Epson	PX-8,WordStar	3,273	40	12.2
13	Epson	QX-10,Valdocs	5,575	68	12.2
14	Nelma	Visual Commuter	5,199	52	10.0
15	Sperry	Mod.20,Samna	8,320	82	9.9
16	Xerox	Memorywriter 640	6,495	56	8.9
17	CompuServe	Smart Word Proc.	8,000	63	7.0
18	Philips	3004 Word Proc.	11,000	77	7.0
19	Xerox	860 wp	9,995	69	6.9
20	Sperry	Mod.30,Sperrylink	11,094	73	6.6
21	Int.Res.Grp.	Writer's+	10,000	65	6.5
22	Xerox	16/8 Computer	8,495	54	6.4
23	IBM	AT,Displaywrite	13,338	76	5.7
24	Apple	Macintosh,Laser	16,202	80	4.9
25	Burroughs	Prof.Word Proc.	16,230	69	4.3
26	NCR	WorkSaver	20,285	63	3.1

For more information on THE GREAT CANADIAN WORD PROCESSING RALLY, and the complete and final results, please call Jim Steinhart at (416) 787-2138.

SOFTWARE FOR THE ATARI ST SERIES COMPUTER

M-DISK **available now** **$34.95**

Get the power of an extra disk drive, without the extra cost! *M-Disk* is a software program that sets aside some portion of memory to make a software duplicate of a hardware drive. Other software works normally using *M-Disk*, just as if you had a super-fast, incredibly durable, ***extra*** disk drive!

MUDPIES **available now** **$29.95**

Avoid danger by using mudpies to ward off angry clowns in this fun-filled arcade game. Colorful graphics, great sound effects, challenge rounds, special prizes, and mud slinging rounds make this a great addition to your game collection.

SOFT SPOOL **available now** **$34.95**

While printing files (from word proccessors, TOS, etc.), your computer is just dead weight; waiting and waiting for the printer to finish. With *Soft Spool*, the wait is over! Now your computer can think and print at the same time! This software spooler sends printed data to the printer between tasks, freeing the computer for more important jobs, and saving you hours of computer time.

FLIP SIDE **available Late September** **$34.95**

If Chess is too complex, and Checkers isn't a challenge, you'll flip over this Reversi-type board game. Flip your opponent's playing disks to your own color as he tries to do the same. Colorful, animated graphics actually show the pieces flip themselves! Play a friend, or against the computer at any of six levels of skill. There's even a Speed-game for a true challenge. View all possible moves, get computer suggested moves, switch sides, and even edit the board in this challenging strategy game.

CALENDAR **available Late September** **$29.95**

This program will keep you up to date! Record and store any notes or appointments from 1980 to 2099, any day, or time. You can access *Calendar* anytime in GEM, as a desktop accessory. Events like weekly meetings can be recorded easily, and without repetition. You can even set special "alarms" to inform you, anytime in GEM, of noted events as they occur!

MI-TERM **available Early October** **$79.95**

Smart-terminal modem program using ASCII, DFT, or X-modem protocols. *Mi-Term* lets you set communication options to connect to virtually any other computer or terminal system. Transfer programs, send messages, and even "talk" between computers.

GOLD RUNNER **available Mid-October** **$29.95**

Arcade game where you journey through underground mines collecting gold while evading the guards.

TIME BANDIT **available Late October** **$39.95**

A true game-players arcade game! Battle Killer Smurphs and others as you try to escape the labyrinths with the Treasures of Time. Journey to medieval dungeons, western frontiers, and future worlds in one game! Two can play simultaneously on their own windows. Scrolling landscapes, detailed animation, thrilling sound, and over 300 playing screens--*the conquest of Time and Space awaits you!*

MichTron

576 S. Telegraph
Pontiac, MI 48054
Phone (313) 334-5700

ST World

by Joe Waters

The speed with which ST developments are evolving is somewhat breathtaking. There is barely enough space here to cover recent developments. Last month there were but a few handful of programs that had just been released for the ST. Some of these very early programs have had some bugs and updates are available (see below). By the time you are reading this column, however, there will be dozens of programs available including games, languages, telecommunications, utilities, and word processors. The STs have been selling exceptionally well -- a pace far ahead of the MacIntosh when it was first introduced. Stores have started unbundling the system so that you can buy extra disk drives (single or double-sided) or another monitor. Some users have upgraded their systems to one megabyte, while others have connected their STs to IBM disk drives. Well, let's see what's going on.

ST Software

CHAT ($19.95) by SST Systems, 3456 Willis Drive, Titusville, FL 32796 (305) 269-0063. Anxious to use your ST for downloading or uploading programs? Well, you can now do it. SST Systems has released CHAT, a simple terminal program that allows upload and download, both in ASCII and using the XMODEM protocol. CHAT was designed to provide a friendly interface to individuals interested in using the computer for telecommunications. It works, of course, on the 520ST, but has also been structured to operate effectively if used on the announced 260ST (or even the 130ST if that were ever produced). SST Systems is planning a whole family of telecommunication programs starting with CHAT and extending to more complex terminal emulating programs and even a BBS program for the ST.

CHAT uses all of the ST function keys so that many common functions are implemented with a single key stroke. It allows you to set up a list of BBS numbers and, if you have a Hayes or Hayes-compatible modem, will automatically dial the number for you. I have used it extensively on CompuServe and have encountered no problems. There were, however, problems in using XMODEM on ARMUDIC, an Atari BBS.

Some of these problems may have been corrected in the latest revision of CHAT. SST Systems has announced that Revision 1.1 cleans up a bug in XMODEM receive that caused CHAT to abort and return to the desktop, when it was talking to certain BBSs. Other changes were made to allow the program to communicate better with CompuServe. This update is FREE to registered owners so be sure to send in your registration cards so you can be notified of this and other future revisions.

EXPRESS ($49.95) by Mirage Concepts, 4055 West Shaw, Suite 108, Fresno, CA 93711. (800) 641-1441. EXPRESS is, at best, a very humble word processor. I have used it to write simple text documentation for the ST Public Domain Library and it performed with mixed results. The editing features and power in the program don't compare with AtariWriter. Mirage has announced a revision to the early releases (see below) but even the revised program seems to do some very strange things when trying to edit a document (for example, you delete a character and a whole line disappears). Unless there are some major revisions in EXPRESS, it won't survive the arrival of the more powerful word processing packages.

Kurt Madden of Mirage posted the following message on CompuServe:

> Although there is a major upgrade in the process, a number of minor additions have been made since our first release: (1) Ability to change screen and text color, (2) Expanded directory listing, (3) Adjustments to Electronic Mail system to improve compatibility with CompuServe, and (4) Minor alteration of Mailing List section to circumvent an error in the GEM Operating System.
>
> For those early pioneers of both the ST and Express, we are offering free upgrades of your Express program. To receive it, just make a backup of your original disk (no - it's not copy-protected) and send us the ORIGINAL (with the label and serial no. on it). We'll copy a new version of the program onto it and rush it back to you.

4xFORTH by the Dragon Group, 148 Poca Fork Road, Elkview, WV 25071 (304) 965-5517 is a full-featured Forth-language development system. This product has been in shipment for over a month now, and has already been used to develop other products such as EXPRESS above. Just before going to press, I received the End user LEVEL 1 version of 4xFORTH. Next month, we should be able to give you a first hand account of this versatile programming language. For more information on 4xFORTH, check the back cover.

MUDPIES ($29.95) by MichTron, 576 S. Telegraph, Pontiac, MI 48053 (313) 334-5700. MUDPIES is the first arcade-style videogame released for the ST. This is a habit-forming game that plays like a cross between "Food Fight" and "Robotron:2064". Working with either the ST's mouse or any standard Atari joystick, MUDPIES pits the player against characters that may be familiar from fast food commercials, to the tune of several ragtime songs. Eight clowns chase you around the screen, tossing juggling pins at you. You grab mudpies and fling them at the clowns. Burgers, milk shakes, and what looks uncannily like McDonald's large fries are available when you get hungry -- but, in one of the game's most unique twists, eating too much is just as harmful as getting too little. MichTron has several other programs that should be ready by the time you read (see their ad on page 39).

WISHBRINGER, ZORK I, and HITCHHIKER'S GUIDE ($39.95 - $49.95) by Infocom, 55 Wheeler Street, Cambridge MA 02138 (617) 492-1031 are available for the adventure fans in the audience.

MEX ($34.95) by Mark of the Unicorn, 222 Third Street, Cambridge MA 02142 (617) 279-5711. See separate review on this game by Frank Sommers. Mark of the Unicorn

also has available a programmer's text editor called **MINCE** and a sophisticated telecommunications package called **PC/INTERCOM**.

ATARI ST BASIC by Atari Corp.. Yes friends, even though I don't have it at this moment, I've been assured by Dave Duberman that ST BASIC should be ready by the time you are reading this. ATARI is also working on a super paint program called **NEO-CHROME** that works in low-resolution color mode. Atari also has developed **STWriter**, ala AtariWriter. And the price of these two gems? Nothing. Atari is going to make them available FREE. In fact, you may already have received them by the time you are reading this. When I get a copy, I will put it in the ST Library.

Atari's paint program may very well be eclipsed by a new program under development by Batteries Included. **DEGAS** (Design and Entertainment Graphic Arts System), is a Macpaint-type program for the ST that BI will be shipping in mid to late October. It is written by Tom Hudson (ex technical editor of ANALOG) and will retail for $39.95. According to Michael Reichman of BI, the program works in all three graphics modes, has an extremely broad range of features including a character set editor, a "fat bits" type mode, user alterable parameters such as being able to create your own line types, brush types, airbrush patterns, font sizes and more. The program's manual is being written by Ian Chadwick (of Mapping The Atari fame) and the disk will come with several example pictures in each resolution mode by some top computer artists.

Hippo-C ($74.95) by Haba Systems, 15154 Stagg Street, Van Nuys, CA 91405 (800) HOT-HABA. If you don't want to spring for the $300 to get the Alycon C supplied in Atari's development system, you can try the new Hippo-C. This is a completely rewritten version of the Hippo-C that has been available for the MacIntosh. I am expecting it any day now and should be able to provide a full description next month. Also from Haba, look for **BUSINESS LETTERS** ($49.95), 50 professionally written, pre-defined letter and memo formats, such as letters to employees, stockholders, customers, vendors, etc.; **WILLS** ($49.95), 14 different legally prepared wills for every need and a guidebook to help you along; and **CHECKMINDER** ($74.95) automatically arranges your checkbook by number, date, payee, or expense category, and will even print your checks for you too!

ANTIC will be getting into ST Software in a big way. ANTIC has signed an agreement with MetaComco, the British company that developed the operating system for the AMIGA, to market their products under the ANTIC label. Three programs will be available in October: an **ASSEMBLER/EDITOR** for those who want to program the ST in 68000 assembler will retail for $110; **LANDS OF HAVOC**, a SHAMUS for the ST with 2000 screens will retail for $25-30; and **C.O.L.R.**, a color object editor for game designers that will allow easy generation of software sprites in low-resolution mode.

In November ANTIC will release ISO **PASCAL** for the ST ($110) and in December look for a **LATTICE C COMPILER** ($160). After the first of the year, we can expect two more development tools from the ANTIC/MetaComco connection: a full implementation of **CAMBRIDGE LISP** ($200) and a cross-development system to port 8088 source code to the 68000.

BOS Coming

The September 16 issue of InfoWorld reports that Atari has purchased the rights to offer a popular British operating system, BOS, as an alternative to the machine's TOS operating system. BOS National, the North American arm of the 7-year-old British firm BOS Ltd., offers a complete line of business software -- one of the programs a database used by Scotland Yard -- and 40 vertical application software packages. Atari is counting on BOS's influence in the European market, especially in Great Britain, to help expand the software for the ST. British developers had the ST before many of their American counterparts. At England's Personal COmputer World show in early September, some 20 software houses showed 80 products for the computer. Programming languages were the most prominent, with several C compilers, Modula 2, and UCSD Pascal packages ready for purchase.

ST News on the Atari BBS

I finally tried out the Atari Corp. BBS (408) 745-5308. Below are some of the ST info downloaded from that system:

ST FACTS. The best text display on any personal computer system for practical applications is Atari's SM124 Monitor. This high resolution monochrome monitor provides true 640 x 400 pixel resolution with astounding clarity.

This monochrome monitor uses an Atari-exclusive video signal that refreshes the picture 70 times each second with a broader bandwidth signal than any other system. Other computers have to "cheat" to get that kind of resolution, cutting down the normal TV's refresh to only 30 frames per second and delivering a picture with noticable flicker. The Atari ST's crisp image provides hours of comfortable viewing.

The fastest interface for a personal computer is the ST's "hard disk port". This is actually a direct-memory-access (DMA) interface that provides communications at an unprecedented 1.33 million bytes per second for a variety of devices. Aside from the 10 and 15 megabyte hard disks that Atari will produce, this port wil accomodate high performance add-ons like the CD ROM, coprocessors, high-speed hard copy peripherals,and local area networks.

ST PUBLICITY. Creative Computing Magazine's October issue features the 520 ST in the cover story with the first review of this system in a major independent computer publication. Their reaction? Here are a few choice exerpts:

"Without question the most advanced, most powerful microcomputer your money can buy..."

"Fairly positioned to blow the Commodore Amiga right out of the water..."

The Atari ST delivers 75% of the splendor of the desktop interface at 25% of the price of a 512K Macintosh." [editor's note: everyone is entitled to an opinion, but we think the ST delivers 110% of the Mac desktop thanks to its speed]

Byte Magazine will present a serious in-depth report on the ST by the end of the year. We don't have any quotes from that one yet, but judging from the fights their editors have had over who gets to play with it next, it should be a goodie. Byte's Editor-in-Chief, Phil Lemmons, visited Atari's engineering and software departments in August and had this to say afterward:

"I visited Atari yesterday afternoon and got my first really good look at an ST520. I'm extremely impressed. Graphics are fast and first-rate. The most important thing is that all the i/o happens so fast. It's hard to believe that this is a low-end machine. I saw a terminal emulator and a rudimentary word processor; when there's a spreadsheet (and I saw two in development) I'll be able to do 90% of my work on an ST. Also saw a fine "Paint" program in development.

"Got a pretty good tour through the development labs, and can tell you that the 32-bit work station is not a myth. Also saw some clever refinements of the desktop on the ST520. Atari is really trying to deliver on its promise of "power without the price" and I think they're going to pull it off. There was no doom and gloom to be seen; indeed, considerable joy was evident about already having shipped 50,000 machines...the ST520 is going to invigorate the drowsy marketplace."

For additional ST stories watch for stories in upcoming issues of Personal Computing, Family Computing, Computer Gaming World, and Compute.

XM301 MODEM COMING. The XM301 modem is scheduled for imminent release. This near-pocket-sized modem plugs into the serial bus and into a phone line. It include auto-dial and auto-answer, and it plays the telephone audio through your TV speaker so yo can hear a busy signal or wrong number (the audio is turned off when you get a carrier).

This modem includes a brand new terminal program on disk called "XETERM", written by HomePak author Russ Wetmore. This program supports X-modem and CompuServe A protocol for uploads and downloads.

Also included are a variety of bonuses for free time on systems like CompuServe, The Source, Delphi, Dow Jones, and others. More free time is included than te total cost of the modem!

The XM301 modem is expected to retail for well under $50. Look for it in the early Fall.

ST Public Domain Library

We have also made considerable progress in building up the ST Public Domain library. Our original set of four disks have now grown to 12 and, I suspect, will be larger than that by the time you read this. Disks in the library are available at NOVATARI meetings for $4 each. Mailorder price is $4.25/disk plus $0.50 for an envelope. Order from CURRENT NOTES, 122 N. Johnson Road, Sterling, VA 22170. If you have programs you would like to contribute to the library, send me a disk(s) with your program(s). I will copy the programs and return your disks filled with the library disk(s) of your choice.

#1: High-Resolution Pictures. Monochrome only. Includes two driver programs for displaying pictures.

#2: Color Slide Show No. 1. Seven pictures including two different driver programs for displaying the pictures.

#3: 4xFORTH Demo Disk. Has all the features of 4xFORTH except the ability to save your work on a disk. Includes 8 documentation files.

#4: ST Terminal Programs. Includes source code and program for STERM by Jez San, TERM by Alan Page, and a simplified version of ST-TALK from QMI. I also expect to haved added HUDTERM from ANALOG by the time you are reading this.

#5: SUNDOG Demo Disk. Color only. Demo of new fantasy-adventure game that will soon be available for the ST.

#6: Color Slide Show No. 2. Seven more pictures including the same two driver programs available on #1 and #2.

#7: Graphics Demos. Approximately two dozen different programs that show-off the graphics capabilities of the ST. Both color and monochrome programs included.

#8: Sample C Programs. Includes complete source code for some of the programs from #7 and also for a series of FRACTAL programs.

#9: Sample LOGO Programs. Having trouble understanding the LOGO manual? Here is a set of LOGO programs that will give you many examples of hov the language works.

#10: MIDI Music Programs. Songs include Banjo, Clem, Evita, Minuet, Moscow, Musette, SanJose. You need an instrument with a MIDI interface to try this one out!

#11: ST Ramdisk. Want to add another disk drive to your 520ST? Includes ramdisk program and documentation.

#12: DOODLE. An enhanced version of the DOODLE program that includes the source code, a great help in learning how to work with GEM windows, scrolling, mouse, etc.

HEX

AN ST GRAPHIC STRATEGY GAME

Reviewed by Frank Sommers

[Mark of Unicorn, Inc., 222 Third Street, Cambridge, MA 02142., (617) 576-2760 $34.95]

"HEX is quite possibly the most challenging strategy game you have ever played -- on or off a computer!", is the claim of its producers. Without even opening the red-on-black package, designed to look like the playing board, your enthusiasm is unusually high. Why?

This is one of the first programs for the ST to reach the Washinton area, and the very first game to whirr up on an ST screen. A bit ironic, since clearly Atari hoped initially to dress their ST in a smart business pin-stripe and then secondarily in its old gaming togs.

THE GAME. Played on a platform of 19 hexagonals chips, connected and floating in dark space, the goal is to turn all of the hexes to green. This is most simply accomplished by directing your unicorn to prance on them. The minor challenge is posed by the presence of an oppoent, sharply and colorfully drawn in miniature, who dances around undoing your work by landing on hexes and changing them into one of the other three colors. To win he must convert the entire platform to purple. The order in which the colors change is unalterable, generating a bit of tension and a first hint of a need to strategize.

Simple? In fact if this was the sum of it, a turn or two and the game could be dismissed as a mix of Silicon and Quebert with a dash of Archon. The statement in the welcoming paragraph of the 8-page documentation, "The game is subtle, the strategies complex, the magic -- mind-boggling!", could also be dismissed as a bit of a boast. Instead, the boast is a world-class understatement.

SPELLS APLENTY. Simply turning the hexes all green before your opponent can reroute your choreography to all purple is one manner of amusement and winning. But doing so when one of "the spells" has magiced up a phatom partner for you or for your opponent, a fast stomping likeness, enhances the pace and adds a dash more of tension. And your clone or his can also cast spells, albeit at twice the energy cost. What kind of spells? "Speed". "Speed" allows you to make several moves, up to four, in one turn. "Help" turns on the computer smarts and the first five moves of a round are executed without you touching the mouse. The mouse, parenthetically, is clicked when the arrow is on the square the unicorn is to proceed to, but add a nice touch. Add the ability to drag the mouse arrow to the ultimate destination and then merely click the unicorn on its way. Truely different than the feel of the joystick directing a hopping figure, and therein more of a sense of strategy takes hold. In sum, there are 17 categories of spells with enough variations in each category to total a 100 such bits of whimsey? The comlexity of the game thus becomes more apparent.

STRATEGIES. Here, without pretending to instruct on how to actaully play the game, only lighting up the monitor and rolling out the mouse can do that, is but a hint of tactics that might be combined into strategies. The first round is a solo with you and the unicorn alone to offer you a feel for the sequence of the colors and knowledge of what color the hex will become when you stomp it. A second round makes you aware that the upper window to the left is counting both your energy level and your maximum energy capacity, the latter should you win the round. The higher the capacity the more you collect in points from the round won. Each jump diminishes your reserve and should you zero out your energy the fat lady sings and the game is over. Spells, e.g. "cloning", "speeding", "faking", can be had for a price in energy and for a specified number of rounds only: all of this is signaled from another window on the left of the screen. (Imagine what those windows will display when CD-ROM becomes interactive and pictures loaded into it are actually movie frames!)

Round two is over; you lost. The screen flashes on at the top, "Hint: Try to turn colors blue in a group before going on to green". Gradually this begins to give you a better sense of play, and when you receive a hint that tells you to gain points by going for a tie if a win is hopeless, you percieve some of the intricacy with which the game was evolved

ADDICTION & ADRENALIN. As you acquire some limited skill at the plays you sense the tension that was building as a particular round ends, either in a win or a tie, because time ran out or you, or the opponent, seeing a loss ahead, turned the hexagonals into a neutral color. The need to balance the use of spells against their cost in energy adds to the mounting excitement and makes this, indeed, a graphic strategy game.

When the play is combined with the novelty of doing it all on your ST, with its sharp detail, and bright solid color for those of you with a SC1224 monitor, the only game in town becomes a winner. How long that will last, certainly depends on what's to follow.

ORIGINAL OR PORTED OVER. In a chat with Unicorn in Cambridge, Mass. we learned that HEX was written in C exclusively for the ST. As some of you are aware, Unicorn was one of the first software companies or groups to acquire an ST; in this instance, almost a year ago. They were asked to port over Mince, the program editor issued in the developers package. To the question of how long it took to translate Mince for the ST, Unicorn responded that their man spent three days in California doing it, adding that all but two hours of that was talking, and that literally two hours sufficed to turn the Digital Research product into a tool for Atari. Rewrites were another matter; as Atari repeatedly modified the ST's operating system, Mince received regular "haircuts".

One footnote, Unicorn states it has already released a business quality communications program for the ST, PC Intercoom, with a full range of inter-office facilities, and they may also be out by the end of the year with a music program for the ST.

NOVATARI DISK LIBRARY

Order disks from the NOVATARI librarian. Price for WAACE members (i.e. anyone who subscribes to Current Notes) is $3.00/disk plus $1.00 for postage and handling for every 3 disks. If you are not a member of WAACE, cost is a flat $5/disk (includes postage and handling.) Send checks, payable to NOVATARI, to M. Evan Brooks, 4008 Patricia Street, Annandale, VA 22003.

GAME DISKS:
1-TEXT ADVENTURES (Crash Dive!, Adventure in the 5th Dimension, Kidnapped!, Operation Sabotage)
2-GAMBLING GAMES (Blackjack, Five Card Stud, Gambler's Dozen, Progressive Jackpot, Poker Squares)
3-SIMULATIONS (Broadway, Civil War, Dairy Farming, Dark Horse, Kingdom)
4-MAZE GAMES (Dragon Maze, Hidden Maze, Caves of Ice, The Halls of the Leprechaun King, Maze Maniac, Master Maze, Maze Race, 3-D Maze, OMAZE)
5-PARLOR GAMES (Othello, Battleship, Monopoly, Mille Bornes, Yhatzee, Simon, Solitaire)
6-GRAPHICS GAMES (Engineer, Night Flyer, Oil Piazza Hotel, Retrofire, Titan)
7-ACTION! GAMES (Rats Revenge, Warp Attack, Birds, Angle Worms, Gems, Snails, Pong, Break Out, Bounce Fun)
8-ARCADE LOOK-A-LIKES (Pac Attack, Livewire, Maniac, Burgers, and more ...)

MUSIC DISKS:
1-TV/MOVIES (AMS I:Cheers, The Entertainer, EWOK Celebration, Knight Rider, Raiders of the Lost Ark,...)
2-ROCK (AMS I:Beat-It, Eye of the Tiger, Thriller, Still Rock'N Roll to Me, I Feel the Earth Move, Spinning Wheel)
3-JAZZ (AMS II: In the Mood, Satin Doll, Take 5, Muskrat Rag, Soda Rag, City Lights, Atrain, Southern Nights, Ghost Busers, We Are the World)
4-BASIC MUSIC Programs (Star Spangled Banner, Flight of the Bumble Bee, The Entertainer, Darktow Strutter's Ball, Handel's Messiah, Mr. Sandman, Bibbidi Bobbidi Boo)

EDUCATION DISKS:
1-MATHEMATICS (Drill, Function, Line, Math Kids, Math Fractions, Math Quiz, Math Time, Multiply)
2-(More educational disks coming in November)

TELECOM DISKS:
1-850 Interface (Amodem Plus V4.4, Amodem Plus XL V2.5, Autodial, TSCOPE, plus several documentation files...)
2-835/1030 Modems (Amodem - 3 versions, TSCOPE, DISKLINK, handlers and docs for all programs)
3-MPP Modems (Amodem Plus V1.6, AmodemXL, MPP File converters, R-Handler, MSCOPE, and documentation)
4-AMODEM 7.1 (Works with all popular modems, many bells and whistle, complete documentation included.)

UTILITY DISKS:
1-MISC UTILITIES (Casette to Disk, Sector Examiner, Make AUTORUN.SYS, Timeclock, and more....)
2-PRINTER UTILITIES (Banner Generator, Cross-Reference Lister, Disk Directory Printer, ATASCII Lister Program, Mailing List Program, Screen Dump, and more...)
3-ATARI DOS 2.5 (DOS.SYS, DUP.SYS, RAMDISK.COM, COPY32.COM, DISKFIX.COM, SETUP.COM, DOS25.DOC)
4-RELATIONAL DATA BASE MANAGEMENT SYSTEM (by Allen Leigh) Provides the BASIC routines you need to build your own database application program.
5-GRAPHICS TRILOGY (by Tim Kilby) AMUCE: a character editor that aids you in designing text fonts; BIP: easy to use graphic drawing program; and MMPC: helps you build your own display-list modifications.
6-COPYMATE 130 (Sector copying program for the 130XE. Copies entire disk in one pass. Makes multiple copies without rereading original.)
7-SECTOR COPIER (Sector copying program for 400/800/800XL series.)
8-TRANSLATOR DISK (Loads old Atari operating system into XL and XE computers so that they can run all available Atari software).

LANGUAGE DISKS:
1-fig-FORTH Version 1.1 (Includes FORTH language, Assembler, Debugger, Editor, and complete doc files)
2-ACTION! Source Programs (Rats Revenge, Warp Attack, Angle Worms, Gems, Snails, Pong)
3-ACTION! GRAPHICS DEMOS (See how Action! can show off the graphics capabilities of your Atari.)
4-ACTION! UTILITY PROGRAMS (Mostly programming aids to help you in your Action! programming)
5-ACTION! MODULES #1 (Assortment of approximately 30 general purpose modules that you can include in your programs. Documentation included.)
6-ACTION! MODULES #2 (Similar to Modules #1 but includes more advanced procedures line an Action! disassembler. Documentation included.)
7-BASIC XL REF-BASE (by Christopher F. Chabris) A miniature database manager built with BASIC XL. Shows how to use many of the special features of BASIC XL.)
8-LOGO DEMOS #1(Coming)

Coming: A series of disks containing "The Best of CompuServe."

NOVATARI PROGRAM EXCHANGE

1-VIZPICS ($3) Collection of pictures (S1:Dark Crystals, S2:Star Trek) generated by Visualizer.
2-WORD BUILDER ($7) Vocabulary-building game and dictionary maintenance program with nine 100-word dictionaries (including grades 2-8).
3-UNDELETER ($3) A menu-driven utility that allows you to recover accidently deleted disk files.
4-WEEKLY SCHEDULER ($5) Allows the user to schedule his/her time for a given week.
5-MATH GAME ($5) Simple arcade game teachs simple arithmetic (addition/subtraction) at 1st or 2nd grade level.
6-PRINT TOOL ($20) Powerful utility descended from, and compatible with, RUNOFF/NROFF printer formatting programs.
7-DEEP BLUE C COMPILER ($8) A subset of Version 7 C based on Ron Cain's Small-C compiler.
8-DEEP BLUE SECRETS ($8) The C source code for the compiler and linker and the Atari Macro Assembler source for the interpreter of Deep Blue C.
9-CHAMELEON TERMINAL EMULATOR ($8) Allows Atari to act as a remote terminal to another computer.
10-DANDY ($8) An action maze adventure somewhat similar to Temple of Apshai and Ultima series.

One Meg ST Upgrade

by Ravi Kulkarni

Have you ever gotten frustrated over swapping disks to copy files in a one-drive ST system, or, if you have the Atari development kit, the 10-minute coffee breaks while the ST is busy compiling your programs? Well, I certainly was -- to the point that I was actively looking into upgrading the amount of memory in my ST for use as a ramdisk as well as for running large applications. To my delight, I found that Gert Slavenburg at Stanford had already upgraded his ST to 1 meg and was kind enough to mail me directions on how I could upgrade mine as well. Since there isn't enough room to include all the instructions here, I will put them on a public domain ST library disk available through Current Notes. The disk will have all the details as well as a ramdisk driver. Before I briefly outline the steps involved in upgrading ST's to 1 meg, let me warn you that this will void your warranty and, if you are not experienced in soldering, may even ruin your ST.

Besides instructions, you also need lots of patience as this requires approximately six hours of work on your ST. First you need to completely take apart your ST. This involves unsoldering the shielding from the pc board. On the lower right-hand side you will notice 16 256k ram chips and capacitors arrayed. I might add at this point that the ST's memory is arrayed as two banks of memory, each of which can be up to two megs. However this would require one meg chips which are not readily available as yet.

The 512k on board is configured as bank0 and the additional 256k ram chips you will add will be configured as bank1. The ram chips are easily available. I got mine from microprocessors unlimited for $2.75 each. The deglitching capacitors need to be removed first after which the new rams are piggybacked on top of the old ones except for the cas and ras pins which are seperately wired to the memory controller. Reinstall the capacitors, put your ST back together, apply power and boot up TOS. Voila! You should have one meg if you did everything right.

Things you will notice are that now the ST can buffer entire disks in memory so disk copies take less swaps. Note that this memory is contiguous memory so you can have larger applications running. Also, if you use the ram disk, disk i/o is speeded up considerably. I have found that compiles using the DRI C compiler is speeded up by a factor of 10-20.

Good Luck if you are brave enough to try this. Even if you are not, you can use the small 97k ramdisk on the public domain disk for the 512k machine. If you would like to upgrade to one meg, but don't feel up to it, give me a call (301) 937-8091 and I might be able to find someone who will, for a fee, do it for you.

How I Made an IBM-ST

(ST with 5 1/4" Disk Access)

By David Small

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You can read and write IBM PC disks on your Atari ST -- if you connect a 40-track 5 1/4-inch disk drive to your 3 1/2-inch disk drive.

Or ... if you don't need IBM file compatibility for an ST, you can connect a 2-sided, 80-track, 5 1/4-inch drive and store 720K on one disk. This will save you money because 5 1/4-inch disks and drives are cheaper than 3 1/2-inch disks and drives.

But can you use the disk drive from your 8-bit Atari? Not if the drive is an 810, 1050, or an Atari workalike such as an Indus, Astra, or Rana. However, ATR8000 and Percom drives will work. They are "industry standard" drives that communicate via standard 34-pin interlace connector.

THE WARNING. Before actually telling how to hook up a 5 1/4-inch drive to your ST, we must caution you this is no job for electronics beginners. You need to solder and to understand the circuitry of whatever 5 1/4-inch you are using. Debugging your new system can be a frustrating experience. Not only that, open up your ST drive and you'll violate the warranty.

RIBBONS AND PINS. Of the 34 pins in the standard industry connector, only about 14 are used. The Atari ST brings these 14 wires out in a short, thick cable that plugs from the ST into the first drive's IN connector. This cable uses a non-standard 14-pin DIN connector, but it carries industry standard signals. Our goal is to get those signals to a standard 34-pin connctor and thus to a standard disk drive.

Theoretically we'd put a 34-pin edge connector on one end of a ribbon cable, 14-pin DIN connector on the other, and we'd have our disk drive cable. However, in practice I couldn't find a 14-pin DIN connector.

INSIDE THE DRIVE. Therefore, the method I chose to use was to tap into the signals inside the 3 1/2-inch ST drive. Besides voiding your warranty, this will probably require you to cut a slot in the drive case for the new ribbon cable.

If you open up the drive (use a phillips screwdriver), you'll find the 14-pin DIN connector expands to (Surprise!) an industry standard 34-pin ribbon cable.

Of course, it does this inside the shield to prevent radio noise from leaking out. A small circuit board has the two 14-pin connectors (IN and OUT) mounted on it, and it connects to the 34-pin ribbon cable inside the drive.

I put a "tap" from the 34-pin ribbon cable in the drive to the 34-pin ribbon cable running to my remote 5

1/4-inch disk drive. I then used a DB-40, 40-pin male and female clamp-on connector to clamp one side to the ribbon cable and the other to the remote drive's cable. Then I plugged the two DB-40s together. You don't have to use a DB-40. Any clamp-on connector that covers the first 34 pins will work fine.

KINKY WIRING. But there's a catch. Atari does something kinky with the drive B select signal. It's on pin 6 of the DIN connector when coming from the ST. But inside drive A it is switched from IN connector pin 6, to OUT connector pin 5, where it becomes drive select for drive B.

This means Atari ST drives always listen on pin 5 for select, and the daisy chain scheme gives the proper drive the correct signal. Thus the two connectors on the back of the ST drive are not interchangeable, like other Atari drives. Plug your ST into the OUT connector, the drive won't work, period.

Therefore we have to jump from pin 6 of the DIN connect (drive B select) to pin 12 of the ribbon cable (drive B select) to get this signal across. Otherwise it doesn't show up on the 34-pin cable. This is easy to do on the bottom of the 3 1/2-inch drive's DIN connect board.

Now we need to set the remote drive as drive B. Sometimes it's called drive 1 or drive 2, depending on whether the manufacturer numbers drives at 0 or 1.

When a drive is idle, a five-volt signal (HIGH) exists on the BUSY line. When the computer wants to access the drive, it pulls down this signal to zero (LOW). When the computer is finished with the drive, it releases the signal and the drive "pulls up" the signal to its original five volts. If two drives are hooked up, only one may contain pull-up circuitry because the computer can only pull down five volts.

Pull-up circuitry usually is contained in a chip in the drive. And now you are at a point where you must know enough about your 5 1/4-inch drive to figure out where the chip is.

Since the ST drive A contains all the pull-up termination circuitry we need we must remove termination packs from the remote drive. In the case of my Tandon TM-100-2 drive I also needed to deal with the select line termination, since it doesn't go through the resistor pack. I had to clip resistor R14 from my Tandon to get rid of the added termination.

Special Note: The ST monitor throws out a lots of magnetism. If you don't keep your drive at least one foot from the monitor, the disk's heads will pick up the monitor's signals and confuse the read data. You'll immediately notice data error if you get your drive close to the monitor. This is good reason to use a fairly long ribbon cable (3 feet or so) (We haven't noticed this problem in-house. ANTIC ED)

ALL DONE. All right, assume you have added an 80-track drive. Put the disk in, close the door and turn on the system. Click on drive B, select FORMAT, and format the disk either single-sided or double-sided.

From then on, treat the 80-track drive as an Atari ST drive. Note: 80 track drives have traditionally been persnickety, which is why 40-track drives remain popular. Keep a sharp eye on the drive's alignment. It takes very little misalignment to make a disk that only one 80-track drive in the whole world can read.

If you've added a 40-track drive, you may use it as an ST drive in only a limited fashion. You can't use FORMAT or a track copy, because they'll try to force the drive past its 40th track.

IBM ST. On the other hand, you can put an IBM PC disk in that 40-track drive, and click on the B icon. It'll pull up the disk's directory into folders and "text only" files.

You'll notice on the top of the window a PC-DOS type of "pathname" consisting of multiple (if needed) folders and a file name. GEM simply turns the concept of pathnames into folder icons and moves you through the path by your actions of selecting, opening, or closing a folder.

Of course, you can't run IBM programs because they are written in IBM assembly language, which the ST cannot understand. However, you can freely copy and use text files and the data within them. Furthermore, if you write back out from the ST to the PC disk, you'll find that an IBM has no trouble reading what you wrote.

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N O T I C E

ATARI 520 ST

SIG Forming

Sunday, October 13

Organizational Meeting from 5:00 - 6:00 p.m. on Sunday, October 13, in the large Auditorium of the Washington Gas Light Co, 6801 Industrial Road, Springfield, VA. This will be just prior to the regular NOVATARI meeting.

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The CD Report

by George Langworth

Compact Digital Audio Disc Format

In September I gave an overview of a new industry: OPTICAL DISC PUBLISHING. This column will briefly cover the format of the Compact Digital Audio Disc abbreviated CD. First, about me: I've been a small business data processing user since 1955 and have followed advanced technologies since I was a teenager who didn't pass the 15 w/m radio amateur's code test.

Somehow describing the CD format in words reminds me of learning about sex from Dr. Ruth. You get all the required information, but it's not real exciting. Pictures and hands on experience would add lots.

Why Digital Rather Than Analog Audio?

The most kind high fidelity audio manufacturers and buyers are paying for almost all the development of CD-ROM hardware. The reason is that digital technology allows PERFECT reproduction of the signal to be recorded and reproduced. It does take 30 times the bandwidth however. To record to 20,000 hertz takes recording equipment and media capable of reproducing 600,000 hertz.

Vinyl discs are analog media. The waveforms you hear are represented in squiggles on the disc. The major and insuperable difficulty is that at each stage in an analog recording process, background, media and equipment induced noise is introduced into the desired signal. It is then added to in the next stage and faithfully reproduced when you hear it. Furthermore, both vinyl discs and magnetic tape deteriorate with use in a variety of ways, so that you don't get later on what you bought.

Digital recording is done with a pulse code modulation system (PCM). PCM divides the analog signal into "words" with n number of bits. CD's have a 16-bit sample or word. Information theory states that if you sample any signal at twice the highest frequency contained in the signal you can reproduce it exactly.

When Philips of the Netherlands, better known as Norelco, and Sony, Japan, began to develop a "perfect" medium to replace vinyl discs and magnetic tape, the laser technology was the one selected. A laser disc could hold the data needed to record PCM because the laser dimensions are in microns or millionths of an inch. So the CD disc and player you buy today for $11 and as low as $169 are the result of a search for a commercial "perfect" method of storing and reproducing audio information (music) from 20-20,000 hertz.

A wonderful benefit is that the PCM record is identical to and in fact is patterned after a 550 million byte magnetic disk. That Magnavox (Philips) player I can buy at my local catalog store for $169 is the functional equivalent of a $15,000 or more DEC 550 megabyte disk drive and controller system, when used for storage and retrieval only. Of course you can both read and write on magnetic disks.

Frame Format on a CD

Visualize a "record" with a spiral track 3 miles long when uncoiled. Also visualize a "track" of about 1 micron or millionth of an inch, 1/100th that of a human hair. This goes by at the average rate of 1.3 meters per second which gives a total playing time of up to 74 minutes.

That 3 mile track is divided into 270,000 blocks or frames, each containing 2,048 8-bit bytes when used for data. The actual frame has:

Synchronization bits
Control byte (256 types of data can be recorded)
Data 2,048 bytes
Error correction bytes
Merging and low frequency suppression.

The error correction code for audio is a combination of two types: Cross Interleave and Reed-Solomon codes. These are designed to reproduce over small and large dropouts from dust particles to scratches. If the damage is too large, the computer-like chip processor will interpolate values for audio. For data, more sophisticated recovery techniques use the extra 512 bytes in each block. This allows data error rates of 10 to the minus 12th to 10 to the minus 15th.

In summary, visualize the CD-ROM disc as a flopyy with 270,000 video display screens or typewritten pages of text. After you have absorbed that, then visualize audio, text, single frame black and white, single frame color and color television pictures all intermixed in any way the disc creator desires. That is the kind of potential information medium the CD-ROM represents.

Source: Digital Audio Technology by H. Nakajima and others, TAB $11.95.

CORRECTION to September CD Report. Technics is manufacturer of a 51 disc carousel. Denon has shown a prototype of a 100 disc unit.

TIME TO RENEW!

Look at the first line of your mailing label! If it says 8510, then this is the last issue of CURRENT NOTES you will receive. If it says 8511 (or 8512), then you only have one (or two) more issues coming before your membership (or subscription) runs out. To remind members who need to renew, I have printed the word RENEW on the first line of your mailing label if you are within two months of your expiration date. PLEASE DO NOT WAIT UNTIL THE LAST MINUTE. RENEW NOW.

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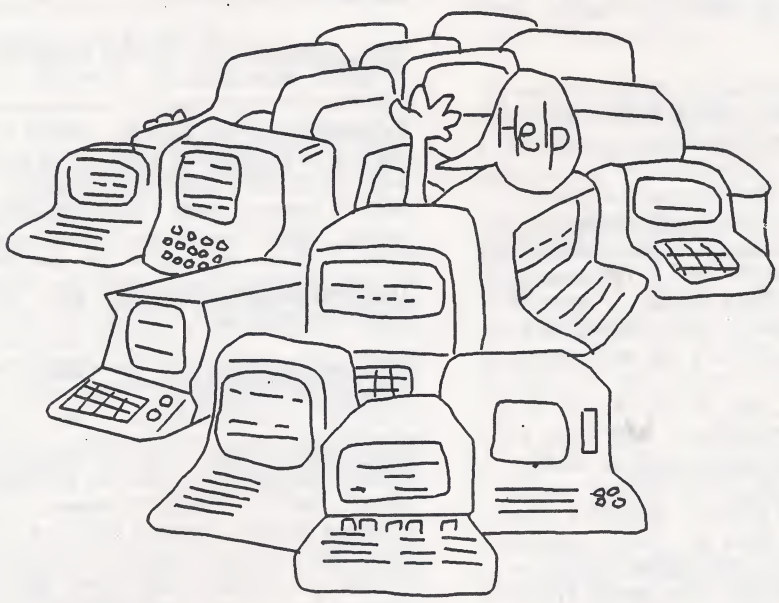

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For further information: Personal Computing Association
Adele H. Stamp Union, Rm. 3113, University of Maryland, College Park, MD 20742

Funded in part by University of Maryland Student Government Assocation

Version 1.0 - 8/8/85

CLUB NEWS:

Capital Pro Micro-Users

CPM Disk Library

Listed below is a brief description of the CPM disk library. Disks can be picked up at CPM meetings or ordered via mail from, Mike Abramowitz, 8732 Sleeply Hollow Lane, Potomac, Maryland 20854. Price is $3/disk. Add $2/disk for mail order.

BASIC Disk #1 - Home Productivity. AMORT (calcs/prints monthly mortgage tables), BUDGET (family budget), CHEKBOOK (executable .COM checkbook program), COMMSN (stock transaction commissions), DESK-DM (Desk Master from Popular Computing), LOAN/GENLOAN (loan payments for various periods), NOTEPAD (executable .COM; create, modify, store, print notes of 20 lines or less), WINDCHILL (calcs wind chill factors). Unless otherwise noted all programs require MBASIC to run.

Catalog Disk #1. MCAT (catalog maint. program; scan directories to update a master catalog), RESTORE (restore erased disk file), XCAT (cross-ref of MCAT catalog).

Data Base Disk #1. For dBase II - Program Generator (assists in developing a menu driven database system; automatic data entry, passwords, search/update/report generation, maintenance routines; doesn't design database; structure must be created with dBase CREATE), Personal Finance (will track checks, deposits, etc.), Disk Directory (MAST catalog output to a dBase II file for sorting and other uses).

Data Base Disk #2. SuperCalc templates - ACRS (calc accelerated depreciation), CHART5 (stock and bond portfolio), AMORT (calcs finance charges and principal remaining), CHKBK (checkbook analysis system), CAS2/FILL (cost estimate template/worksheet). dBase II - Help (provides a quick reference to dBase II commands), ANIMATE (scrolls a character string across screen while using dBase II).

Data Base Disk #3. For dBase II - Master Catalog Program, Practical Tutorial (interesting dBase tutorial), U Graph (generates screen bar or scatter graphs), Mail Mark (dBase mailing list program generated by Quickcode), Text Search (six dBASE II command procedures for text search on a dBASE II data base).

Disk Tool Disk #1. The utility "DU" - inspect/change CP/M disk sectors.

ATR FORTH. An enhanced 8080 FIG-FORTH with a full screen editor.

MS/DOS #1. ALSEARCH (search directories/sub-dir. on multiple drives for a file name), ALTER (display/change file attributes), COVER (print sorted directory to insert into disk jacket), CWEEP (Ver.1.30; MS/DOS version of CP/M SWEEP utility), FDATE (set file time/date), FREE101 (reports drive free space), GCOPY (file copy with ambiguous file names), LC (tells number of lines in a file), MEMBRAIN (RAM disk device driver), PWD (displays the path of the current default directory), SDIR26 (a disk directory with many options), SETPRN (transmit hex or ASCII printer commands), SHOWDIR (screen listing of all subdirectories), VOL (deletes files with verification), VOLSER (add/change disk volume label), WAIT (idles system for specified seconds), WHEREIS (searches for file name, reports by subdirectory), SPOOL (redirect parallel printer output to a disk file).

Printer Disk #1. DBL (two pages/physical page using condensed print.; EPSON RX80 and Oki82A/92), ENDPRINT (prints downloaded character set; Oki92), FANCFONT (a demo of; EPSON MX80/80FT/100 with Graftrax80/Plus FIXTEX11 (copies files, striping control characters/high order bits), FXSET (sets EPSON print modes), GEMINI0X (configures Gemini-10X), GREEKPH (Greek/ math characters; Oki92), ITALICPH (ASCII Italics for downloading; Oki92), LF (design/download fonts; Oki92), LOOKUP (ASCII string search), MXSET (config. EPSON MX80/100), OKIFONT (creates characters; Oki92).

SIG/M Catalog. The catalog SIG/M Users Group of ACG-NJ to 09/08/83, Volume 136.

Telecommunications Disk #1. MODEM (original ATR8000 modem program with defaults set to 1200 baud and expert mode), ATOC (ATARI-CP/M disk file transfer), Numbers of RCPM BBS, NCAT (a catalog maint. program), RS232 (explains RS232 ports), KERMIT (an explanation of the KERMIT protocol).

Telecommunications Disk #2. MEX - Ron Fowler's MEX communications program.

Telecommunications Disk #3. MODEM7 - Irv Hoff's MODEM7 communications program.

Utilities Disk #1. NSWEEP (clasic utility to view/rename/print/copy/delete and squeeze/unsqueeze files), SQUEEZE-16/USQ-20 (squeeze/unsqueeze files), LU (Library Utility; permits multiple files in a library form; run programs, extract/delete/add files), DD (disk directory program), FIND (finds ASCII upper case char. strings in a file), LDIRR (prints a library file directory to the screen), DE-LBR (extracts .LBR library compressed files).

Utilities Disk #2. SD (directory program), LSWEEP13 (extracts and unsqueezes library files), PRINTSQ (prints a squeezed file), LU300 (a library utility to create, run, extract, delete, add files), LABEL (prints disk directory; EPSON FX/MX with Avery 4013/4014 labels), DIRBANNER (print disk directory on an EPSON MX-100 or NEC-8023/C.Itoh-8510A).

Utilities Disk #3. NULU (replacement for LU/LSWEEP13), TYPE15 (lists a normal or squeezed file to the console), NSWEEP27 (a version of NSWEEP2), SUPERSUB (allows system commands to be read from a disk file for automatic processing), DISKDEF2 (like the orig. DISKDEF, but allows more than one drive to read/write a different format; can reset a redefined drive to ATR format without resetting the ATR), RECVER21 (recover a deleted file), AREACODE

(supplies the locations of a telephone area code), Com-Menu/MBasMenu (generate menus permitting selected programs to be run).

Utilities Disk #4. FILELST (files to LST:), FIND2 (find text string in one or more files), SETPRN (sends printer setup strings), DR12/DR13 (disk directory program; shows deleted files), FBAD60 (excludes bad disk sectors), MAGE (recover WordStar text left in memory), TELL (show addresses of various CPM parts), SAP (read/sort/rewrite disk directory), MAKE ("move" a file between disk user areas), LOCK/UNLOCK/MKEY (read protect files), SUPERZAP (interactively read/change/write disk sectors), NSWEEP3 (Ver. 2.07, 07/13/1984), PSWORD (password protect a .COM file).

Word Processing #1. Footnote (for WordStar), Calculator (emulates a HP-15 programmable calculator), Print Utility (produce multiple copies of a file), Swap Copy (a one drive file copy), Word Plus (describes the WORD PLUS spelling checker).

Northern Virginia Atari Users Group

NOVATARI September Meeting

by Dave Meyer

Our September meeting was a busy one, with a little something for everyone. Bruce Blake showed us his modified 130XE with its 327k memory, along with a demo of his picture flipping program that held 43 pictures. Thats the equivalent of four single-density disks. Evan Brooks reviewed "Decision in the Desert", "Crusade in Europe", and "Colonial Conquest", and by popular demand, "APPLKILL" from ARMUDIC was shown. Dennis McCormick demonstrated "Microcheck," a checkbook program taken from ANALOG editions 27 and 28.

The "Home/Business Productivity" portion of our meeting featured "Writer's ToolMicrocheck", a checkbook program, taken from Analog editions 27 & 28.

We will modify our program format slightly starting in October switching the "Open Forum" and "Home/Business Productivity" portions of the meeting. This means that all of the demo's should be completed by 7:30.

We'd like to demo the Julius Erving/Larry Bird "One on One" game at the October meeting. If you'd like to participate and show us your skills, give me a call at 455-7145.

Programmers SIG Forming

Ed Seward

We're going to try starting a new SIG - The Programmer's SIG. The organizational meeting will be at 5 PM in the small auditorium on October 13th. All WAACE members are welcome. Personally, I would like the SIG to be for those that enjoy the challenge of programming on their Atari. Come out and have a hand in the organization of the SIG.

Telecomm SIG Notes

Dick Knisely

The SIG now has a membership of well over 30 people. Last meeting I passed out a roster of the membership to all. In the last three meetings we have discussed what we would like the SIG to do, when and where to meet and a wide variety of topics concerning modems and BBS'. It has proven to be a valuable source of information for all concerned and a great place for the never modem users to try to make some sense of the mysterious-appearing world of telecommunications. I encourage all NOVATARI members, regardless of experience level, to drop by a SIG meeting and listen in!

As part of the continuing process of organizing the NOVATARI meetings we will try changing the time this SIG meets to 5:30 pm preceding the main meeting. This is being done in an effort to avoid a conflict with the demos part of the meeting.

A big thank you from myself and many of the SIG members to the SYSOPs of the Novatari BBS for their efforts in general and especially for creating the new message base dedicated to telecomm topics. Lets all make an effort to keep that base dedicated to that topic -- try not to scatter the telecomm discussions across the rest of the board if at all possible. Again -- thanks to the Sysops.

At the next SIG session I would like to discuss what we would like to see the SIG get involved in. So, be thinking of what you'd like to see us do -- AND what you can do to help get it done. See you all then!

President's Report

by Joe Waters

October Meeting. Although things aren't quite definite yet, at the moment changes are quite good that we we will have Neir Harris, editor of Atari Explorer, and Dave Duberman, Atari User Group Coordinator, as guest speakers at our October meeting. If Neil makes it, we should also be able to see demonstrations of the new Atari 8-bit software due out in October including AtariWriter Plus, Proof Reader, Silent Butler, and The Learning Phone. This is a meeting you won't want to miss! Needless to say, members from all WAACE groups are cordially invited.

I recently had a chance to see another demo of the amazing "encyclopedia on a disk." Activenture, the firm leading the industry in this technology, is in the process of producing a video-tape of a CD ROM demonstration. If we can get it, we will also have that available at the October meeting.

WASHINGTON AREA ATARI COMPUTER ENTHUSIASTS

NCAUG NATIONAL CAPITAL ATARI USERS' GROUP

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DISK LIB.	MIKE POLLAK	703/768-7669
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MEETINGS: 3rd TUE, 5:30 to 8:30PM, Room 543, Nat'l Science Foundation offices, 1800 G St. NW, Wash. DC. The closest subway stop is Farragut West on the Blue and Orange lines. Take the 18th St. exit and walk South on 18th against the flow of traffice for three blocks to G St. The building, on the corner of 18th and G, can be identified by a sign for the Madison National Bank on the corner. Parking is available in the building for a fee. The parking entrance is on the West side of 18th St., between F and G Streets.

NEW MEMBERS: Dues are $15/yr including a subscription to Current Notes. Send check payable to NCAUG, to Allen Lerman, 14905 Waterway Drive, Rockville, MD 20853.

CPM CAPITAL PRO MICRO-USERS' GROUP

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VP-PROGRAM	FRANK JONES	301/593-1056
DISK LIBRARY	MIKE ABRAMOWITZ	301/903-2363
SYSOP/BBS	FRANK HUBAND	703/276-8342

MEETINGS: Meetings are held each month in the Author Room of the Public Library in Oxon Hill, Md., located near the Woodrow Wilson Bridge just off the Beltway. From Virginia via the Woodrow Wilson Bridge, stay on the Beltway to Maryland Exit #4 West (St. Barnabas Road). St. Barnabas Rd. merges with Oxon Hill Rd. (right turn at end of exit ramp). Proceed 1/4 mile; the library is on your left. The library phone number is 301-839-2400.

NEW MEMBERS: Dues are $15/year (includes subscription to Current Notes) or $3/yr (no subscription). Send check, payable to Reg Brown, to Reg Brown, 9328 Bent Ridge, Potomac, MD 20854.

MORE ⟶

NEW MEMBER INFORMATION

IF YOU WOULD LIKE TO RECEIVE **CURRENT NOTES** AS A MEMBER OF ONE OF THE WASHINGTON AREA ATARI USER GROUPS, FILL OUT THE FORM BELOW (OR A COPY) AND SEND IT TO THE USER GROUP OF YOUR CHOICE. SEE ADJACENT LISTINGS FOR MEMBERSHIP FEES AND MAILING INFORMATION. IF YOU WOULD LIKE TO SUBSCRIBE DIRECTLY TO **CURRENT NOTES**, SEND A CHECK FOR $15.00, PAYABLE TO CURRENT NOTES, TO JOE WATERS, 122 N. JOHNSON ROAD, STERLING, VA 22170.

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WASHINGTON AREA ATARI COMPUTER ENTHUSIASTS

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MEETINGS: 1st Thursday of every month, 7PM, Wheaton Library, 11701 Georgia Ave., Wheaton, MD.

NEW MEMBERS: Dues are $15/year; includes subscription to Current Notes. Mail check, payable to AURA, to Treasurer, AURA, POB 7761, Silver Spring, MD 20907.

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SYSOP	SAM YU	301/662-5586
BBS		301/694-8983

MEETINGS: Third Tuesday of each month, 7:00PM to 9:30PM, in the Parish Hall behind St. Paul's Lutheran Church, located at 14 West Pennsylvania Ave., Walkersville, MD.

NEW MEMBERS: Dues $20 yearly per family; includes subscription to Current Notes. Send check, payable to FACE, to Buddy Smallwood, POB 300, Keedysville, MD 21756.

SMAUG SOUTHERN MARYLAND ATARI USERS' GROUP

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SECRETARY	DOROTHY LEONARDI	301/839-1363
TREASURER	BOB BARNETT	301/934-2617
DISK LIB.	JIM SANNER	301/884-5840

MEETINGS: 7:30PM on the second Thursday of each month at the John Hanson Middle School in Waldorf, MD. Take MD Route #5. Proceed about 1/2 mile East of the intersection of Route 301 and take first left past the Kinney shoe store to the school.

NEW MEMBERS: Dues are $15.00/yr, including subscription to Current Notes. Mail check, payable to SMAUG, to Bob Barnett, P.O. Box 612, Waldorf, MD 20601.

NOVATARI NORTHERN VIRGINIA ATARI COMPUTER USERS' GROUP

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PROGRAMS	DAVE MEYER	703/455-7145
DEMOS	DENNIS MCCORMICK	703/430-9552
SEMINAR	DONNA YARBROUGH	703/255-3967
EDUCATION	DIANA BURDT	703/425-5873
DISK LIB.	M. EVAN BROOKS	703/354-4482

MEETINGS: 2nd Sunday of each month, 5:30 to 8:30PM, in the large Auditorium at the Wash. Gas Light Bldg., 6801 Industrial Rd., Rd., Springfield, VA. From the Northwest: Beltway (I495) to East on Braddock (620); to South on Backlick (617). From From Northeast: Shirley Highway (I395) to West on Edsall Road (648) to South on Backlick. Take a left at the light by Industrial Rd. Washington Gas Light is the second bldg. on the right.

NEW MEMBERS: Dues are $15/year, including subscription to Current Notes. Send check, payable to NOVATARI, to Curtis Sandler, 7213 Idylwood Court, Falls Church, VA 22043.

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SECRETARY	MIKE STRINGER	703/786-8755
TREASURER	CURT PIERITZ	703/494-3784
LIBRARIAN	ARNIE TURK	703/670-2547

MEETINGS: Monthly, 7-10PM, usually on 3rd TUE, in the Community Room, Potomac Branch, Prince William County Library, Opitz Blvd., Woodbridge, VA. Exact dates: OCT 15, NOV 26 (4th TUE), DEC 17, JAN 21, FEB 18, MAR 17 (3rd MON), APR 15, MAY 20, JUN 17. Entering Woodbridge from either the North or South on Route #1, proceed to the intersection of RT #1 and Opitz Blvd. (adjacent to Woodbridge Lincoln-Mercury). Turn West on Opitz and take the first left turn into the library's parking lot. The Community Room is located to your left immediately upon entering the main building.

NEW MEMBERS: Fee is $10/per yr plus $1.00 monthly dues; includes subscription to Current Notes for members in good standing. Send checks, payable to MACUG, to Mike Stringer, 709 Rutherford Drive, Fredericksburg, VA 22401.

Introducing
4xFORTH for the Atari 520 ST

4xFORTH Level 1 System contains:

A 32 bit Forth based on the '83 Standard with 32 bit Stacks and Variables
Multiuser, Multitasking 4xFORTH System
Full screen editor with function key support
Assembler with mode/register error checking
Access to Atari file system
Ram disk and serial disk support
User addable disk and terminal drivers
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Checking vocabulary for program debugging
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Support for Atari graphics primitives

Introductory price is $99.95

4xFORTH Level 2 adds:

Support for GEM graphics
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An optimizer of high level code which yields a 30 to 80% speed improvement by the generation of in-line machine code from high level code.

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4xFORTH Developer's System

Priced at $500.00

4xFORTH Upgrades

4xFORTH systems may be upgraded to other levels for the difference in cost of the Levels plus $10.00.

4xFORTH is fast:

Benchmark (1)	4xFORTH	with Forth Accelerator
Byte Sieve	2.28	1.02
Fast Sieve	1.35	0.456
Loop	0.364	0.102
-Test	1.61	0.59
*Test	1.91	0.88
/Test	2.54	1.45
Move Test	1.53	0.64
Comp Test	2.0	0.80

(1) Byte, Nov. 1984, p. 308-310.

Availability:

4xFORTH Level 1	Immediate
4xFORTH Level 2	September
Forth Accelerator	Immediate
Developer's System	Immediate

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